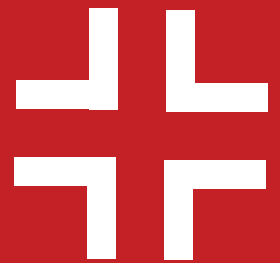




Thomas Anderson

STURMGESCHÜTZ

PANZER, PANZERJÄGER, WAFFEN-SS AND
LUFTWAFFE UNITS 1943–45



STURMGESCHÜTZ

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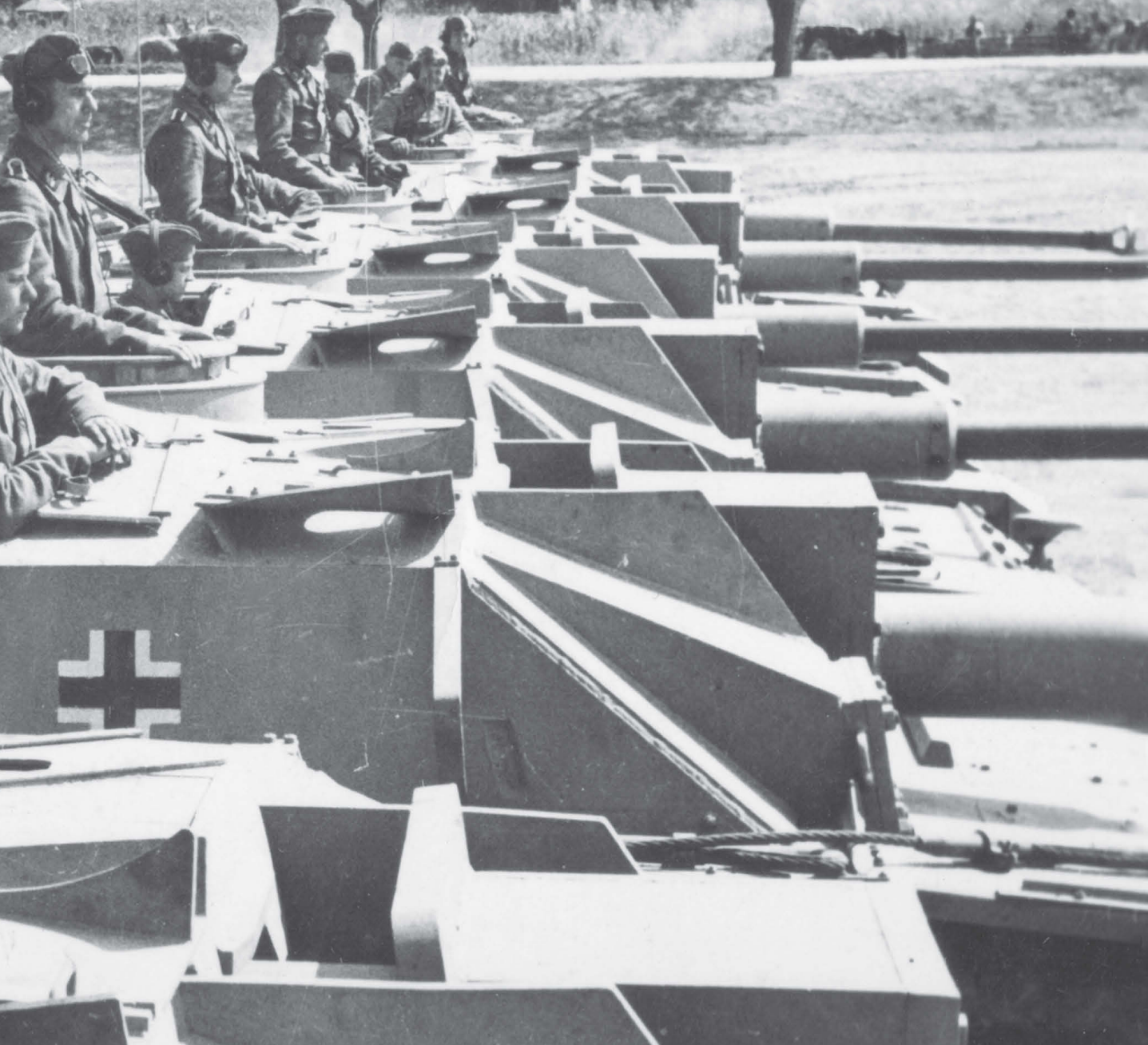
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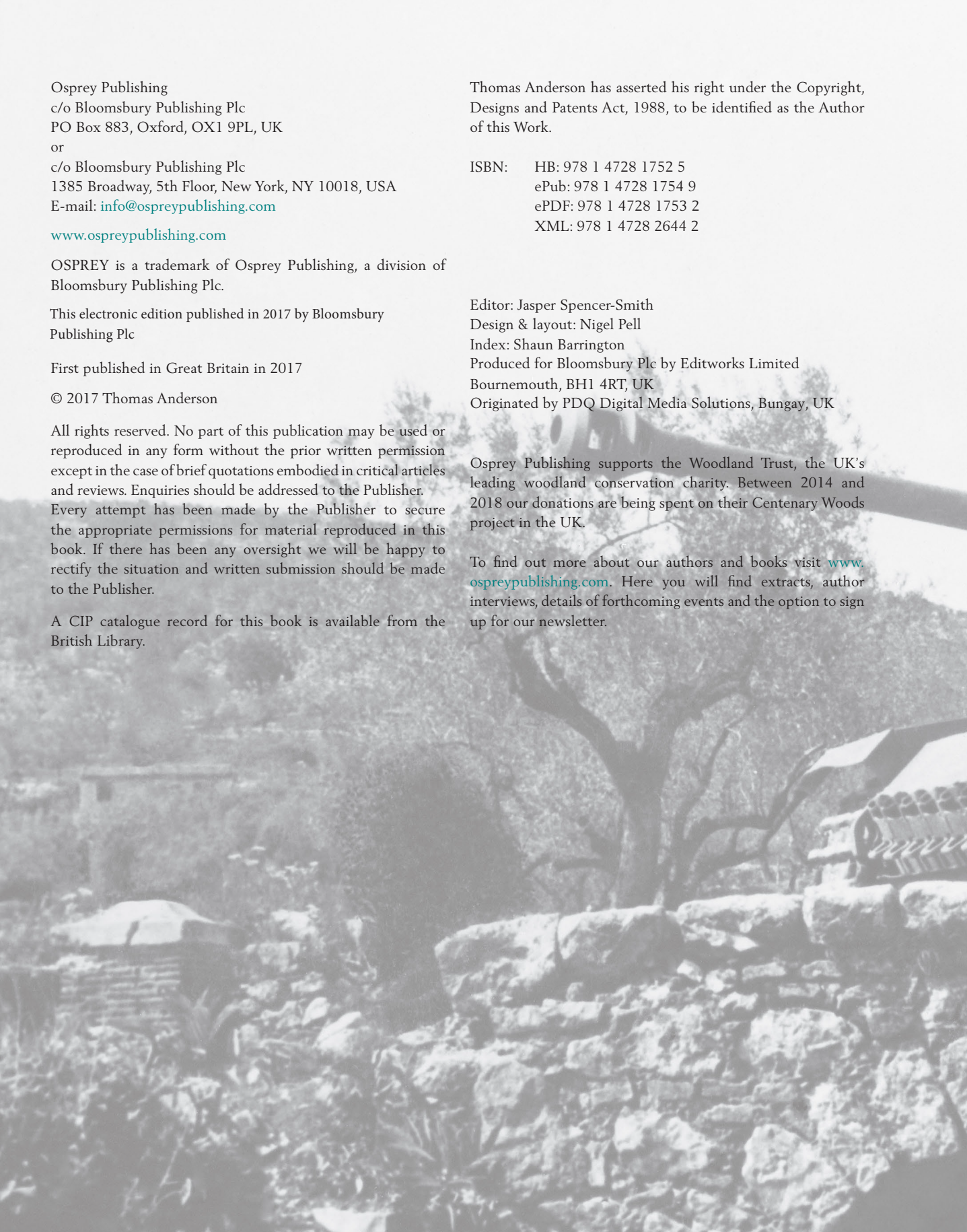
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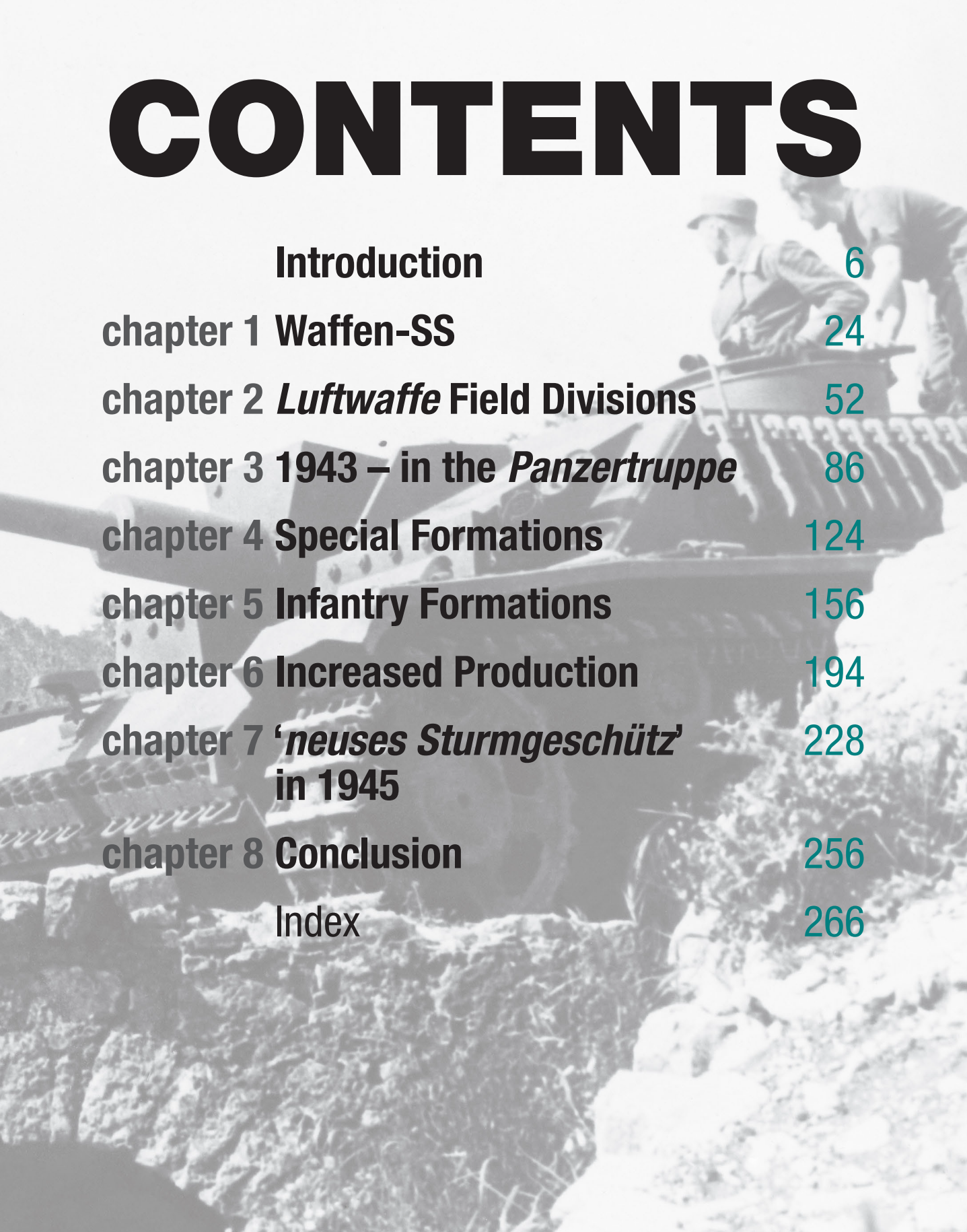
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Introduction

The *Sturmgeschütz* was a genuine German invention and, although the idea of mounting a gun in a fixed superstructure was neither new nor future-looking, the type became a vital weapon in the arsenal of the Third Reich and was produced in very large numbers.

As described in my book *Sturmartillerie* (Osprey, 2016) the *Sturmgeschütz* assault gun was originally intended to be a support weapon for the assault infantry. The requirement for such a vehicle was noted in a letter, dated 8 June 1936, written by an officer of the *Generalstab des Heeres* (GenStdH – General Staff of the Army) to his superiors:

We have to ascertain that the *Panzerwaffe* and the *Sturmartillerie*, which are both similarly equipped, will follow absolutely different tactical approaches.

I.) *Panzerverbände* [tank formations, here Panzer divisions (PzDiv), author] are mixed units able to fight independently and pursue their own combat missions. These PzDiv are equipped with motorized artillery and infantry to enable success.

II.) *Panzerbrigaden* [tank brigades] is the force for the focal point of an attack. In contrast to the PzDiv, the *Panzerbrigade* is unable to operate independently.

III.) *Sturmartillerie*, it is relevant as to whether it will be produced as a tank or a self-propelled gun, or a support weapon for the infantry. It should be able to provide support fire at a minimum range of 7km as part of the divisional artillery. The *Sturmartillerie* is deployed as escort artillery to support an infantry assault by directly attacking dangerous targets. Unlike a tank formation, which attacks in large numbers, the *Sturmartillerie* will only be committed in platoon strength.

Each infantry division will have to be issued at least with one battalion of *Sturmartillerie* formed of five batteries with six assault guns each. The division should consider the removal of a light artillery battalion or the tank destroyer battalion.

Generaloberst
Heinz Guderian,
Generalinspekteur der
Panzertruppen, making a
speech to an assembly of
tank crews while standing
on the engine deck of a
Sturmgeschütz. Initially he
had vehemently opposed
the introduction of the
type, but by 1943 he was
forced to realize that the
Sturmgeschütz was vital
if the combat strength
of his armoured forces
was to be maintained.
(Historyfacts)



A *Sturmgeschütz* Ausf F/8 carrying *Luftwaffe* infantry, possibly during a training exercise. The only markings on the vehicle are the solid *Balkenkreuze* (the word is for a cross made from two baulks of timber and not a reference to the Balkans) which were applied by the manufacturer. (Anderson)

The GenStdH replied in a letter dated 16 June 1936, with these comments:

- 1) In general, we agree on the specification and tactical deployment for the proposed *Sturmgeschütz*.
- 2) It seems necessary to emphasize the difference between the *Sturmartillerie* and the divisional [conventional, author] artillery to set clear requirements for the development of the type.
- 3) It is the task of the *Sturmgeschütz* to destroy enemy machine-gun nests by direct fire; thus it is a weapon of the infantry, and must not be committed as artillery. Also as the infantry operates at ranges up to 4km only, sighting devices for indirect fire up to 7km range are not necessary.
- 4) Also it must be explored if the *Sturmgeschütz* can perform as the (currently under development) tank destroyer. Thus duplicated development can be avoided.

However, the demand for the production of such a large number of *Sturmgeschütz* was beyond the capacity of the German armaments industry. In 1939, the first phase *Mobilmachung* (general mobilization) resulted in the formation of 39 infantry divisions, five tank divisions, three mountain divisions and four light divisions. As part of this plan, the GenStdH decided

that there was a far from realistic requirement for more than 1,100 *Sturmgeschütz*.

At the beginning of *Fall Weiss* (Case White), the Polish campaign, the *Panzerwaffe* was equipped with some 3,000 tanks, but only 750 were truly of combat value. German military planners accepted the situation, and all plans to provide an infantry division with a *Sturmgeschütz* detachment were forgotten.

This was possibly instigated by *Generaloberst* Heinz Guderian (one of the 'fathers' of the *Panzerwaffe* and certainly its most influential supporter), who had identified the financial limitations. Subsequently he strongly opposed any suggestion of supplying the infantry with tanks, being convinced that the establishment of an armoured element for the infantry would weaken his creation; a battle-winning powerful and efficient *Panzerwaffe*.

However in 1940, when forces commanded by General Erich von Manstein – who supported the idea of armoured elements for the infantry – received 30 *Sturmgeschütz* a new military force was born: the *Sturmartillerie*.

Due to severe financial constrictions, *Sturmgeschütz* production commenced in late January 1940 and proceeded at a very slow rate. Over the next 12 months some 184 were produced, and a further 540 were built during 1941. Five independent batteries were established, before and during the invasion of France, possibly to trial how the type could be used

In early 1944, to allow an increase in production of the *Sturmgeschütz* it was decided to use the chassis of the PzKpfw IV resulting in the *Sturmgeschütz* IV. The vehicle has been coated with Zimmerit anti-magnetic paste and is fitted intact with *Seitenschürzen* (side skirts). Although no unit markings are visible, the vehicle is known to be from SS-PzAbt 17, part of 17.SS-PzGrenDiv Götz von Berlichingen. (Schneider)



A *Sturmgeschütz* carrying infantry advances towards Banská-Bystrica (an anti-Nazi stronghold) to attack partisan forces fighting in the Slovakian National Uprising, which began on 29 August and was put down on 27 October 1944. (Anderson)







A *Sturmgeschütz* from 24.PzDiv; this was the only PzDiv to maintain the traditions of a former cavalry division. Instead of batteries or companies, the unit had *Schwadronen* (squadrons). The vehicle appears to be new and has a chassis number (95210) stencilled on the front, identifying it as having been built by Mühlenbau und Industrie AG (MIAG). (Münch)

in combat. In the autumn of 1940, the first assault gun battalions with three batteries of six *Sturmgeschütz* each were established. Despite the original intention to provide each infantry division with a StuG battalion, these units were organized on *Heerestruppen* (army troop) level. The staff at higher command level decided that they should be deployed at the focal point of an attack, either concentrated during a major assault or divided into single batteries.

The *Sturmgeschütz*

The leading idea behind the *Sturmartillerie* was to give the attacking infantry battalions an armoured spearhead, a 'battering ram' intended to neutralize enemy infantry or anti-tank gun positions. However, it is interesting to note that before World War II began discussions were taking place as to whether the *Sturmgeschütz* could also be used as a tank destroyer, possibly replacing the dedicated tank destroyer battalion in an infantry division.

At that time the GenStdH preference was for open-topped vehicles which allowed the crew to have to a clear (but dangerous) view of the

The crew of a *Sturmgeschütz* Ausf G from 1. Skijäger-Division are wearing the standard-pattern field grey *Sonderbekleidung* (special clothing). The vehicle is fitted with *Winterketten* (winter tracks) to improve mobility over muddy or snow-covered terrain. A wooden beam, for recovery purposes, has been placed on the track cover. (Anderson)



battlefield. This was soon dropped, since the vehicles would operate near or at the front-line and under heavy fire from all types of weapon.

By 1939, the design and development of a very low-profile vehicle with a multi-angled superstructure built on the chassis of the PzKpfw III Ausf F had been completed. It was armed with a short-barrelled 7.5cm K 37 L/24 in a mounting which allowed limited side traverse.

The somewhat (at that time) heavy calibre gun had a flat trajectory ideal for attacking enemy positions with high-explosive (HE) ammunition. Combat against an enemy tank was to be avoided and only occur in an emergency.

After the launch of *Unternehmen* (Operation) Barbarossa, the invasion of the Soviet Union, *Sturmgeschütz* units were compelled to attack a wider range of targets when German infantry divisions were faced by masses of Soviet tanks. The situation became more desperate when the Red Army deployed the T-34 medium tank and the KV heavy tank, in ever-growing numbers on the battlefield. German tank destroyer battalions had become depleted and could not cope; the situation began to threaten the front-line positions held by the infantry.

When available, *Sturmgeschütz* proved to be capable of defeating the superior modern Russian tanks; at close range the 7.5cm gun, when firing HE ammunition, could seriously damage the turret or destroy the running gear on a T-34 or KV. If armour-piercing (AP) ammunition was available then the gun could penetrate the side and rear armour of an enemy tank. However, the clear tactical superiority of the better-trained crews and their well-functioning radio equipment should turn out to be of greater importance in deciding many battles.

The men of the *Panzerwaffe*, including Guderian, had no choice other than to accept that the *Sturmgeschütz* was a very versatile weapon and that the *Sturmartillerie* was a valuable asset to the army. Alkett, at that time the sole manufacturer of the *Sturmgeschütz*, was ordered to increase production; around 80 were completed in April 1941, and this number would steadily be increased.

The *Panzerschock* (tank shock) became more prevalent among German forces as ever-increasing numbers of T-34 and KV tanks appeared on the battlefield. To improve the situation a number of measures were expedited, the most important being the development of a new and powerful tank (also anti-tank) gun: the 7.5cm KwK 40 L/43 (for tank use) or StuK 40 L/43 (for *Sturmgeschütz* use). The gun had a long barrel which produced a much higher muzzle velocity. In March 1942, this high-performance gun began to be mounted in the *Sturmgeschütz* and the PzKpfw IV Ausf F2 and Ausf G.

A short time after the first KwK 40-armed *Sturmgeschütz* reached front-line units it was found that it could be successfully used as a *Panzerjäger* (tank destroyer). Many *Sturmartillerie* units, deployed to support the infantry, were re-tasked to this new role and the *Sturmgeschütz* became a weapon much feared by Soviet forces on the *Ostfront* (Eastern Front).



One question, seemingly a ridiculous one, arises: What exactly defines a *Sturmgeschütz*? Is it the technical layout; the lack of a turret, or is it how it was deployed tactically? It is my opinion that combination of all these features that characterizes the German *Sturmgeschütz*.

While the original task of 'supporting an assault by the infantry' was the primary deployment for the StuG as part of the *Sturmartillerie*, assault guns were being issued in growing numbers to other services. For a number of reasons (which will be discussed later), *Sturmgeschütz* were assigned to the Waffen-SS, and also to the *Panzerjäger* detachments of *Luftwaffe* field units. By 1943 the situation with the supply of tanks became desperate: inadequate production in the Reich forced military planners to divert assault guns to Panzer grenadier and tank divisions.

At around the same time the meaning of the term *Sturmgeschütz* would also change. As enemy equipment improved, military planners initiated the

December 1944: A *Sturmgeschütz* in a battle-damaged German town during fighting to the west of Aachen. Retreating German troops would soon set up positions in the Hürtgen Forest, in an attempt to delay the advance by US forces. The *Seitenschürzen* (side skirts), intended as protection against the Soviet anti-tank rifle. (Anderson)



Sturmgeschütz of an unidentified unit advance along a mud-covered road: The crew has fitted a large tarpaulin over the superstructure to prevent rain from entering the fighting compartment. (Getty)





A factory-new *Sturmgeschütz* Ausf G: The single numeral '7' possibly indicates that it is from a smaller unit, such as a company issued to an infantry *PzJgAbt*. The cast-metal deflector fitted in front of the cupola was added on the assembly lines. The crew has used concrete to further reinforce the armour. (Anderson)

rapid development of new weapons. Parallel to the work on heavy tanks, a *schweres Sturmgeschütz* was produced, using the chassis of Ferdinand Porsche's ill-fated design for the Tiger tank. Known as the 'Ferdinand' it was intended as a *schwerer Durchbruchspanzer* (heavy breakthrough tank), thus strengthening the offensive arsenal of the *Sturmartillerie*. The *schweres Sturmgeschütz* was assigned to five *Sturmartillerie* battalions; three existing (*StuGAbt* 911, 197 and 912) and two new units. However, all were transferred to the *Panzerjäger Truppen* (tank hunter Troop).

Adolf Hitler's obsession for a heavier tank had been temporarily satisfied. However, German engineers were compelled to design and produce ever heavier types, culminating in the 70-ton *Jagdtiger*.

During this period, at the instigation of Guderian, a time-consuming conflict of interests began in the military. While the artillery was confident of getting new heavy weapons, the new *Generalinspekteur des Heeres* persuaded Hitler to supply the new Ferdinand to the *Panzerjägertruppe*, and

thus under his control; the *Sturmartillerie* had finally lost any prospect of receiving more effective weapons.

Despite the fact that the *Sturmgeschütz* had proven to be a reliable and effective tank destroyer on the Eastern Front, continued availability of the type was put into question. To facilitate the manufacture of the PzKpfw V Panther, all production of the PzKpfw III was halted despite the effect this would have on the supply of assault guns. In medium turn, it was considered that all *Sturmgeschütz* would be produced on the chassis of the PzKpfw IV. However, these plans were not implemented.

More importantly, in late 1942 the development of a '*neues Sturmgeschütz*' (new assault gun), which was intended to replace the *Sturmgeschütz* as a tank destroyer, began. Guderian demanded that these new developments were placed under the control of the *Panzerjägerwaffe*; ultimately the new assault gun became the *Panzerjäger*. The tank destroyer units were clearly identified, and the *Sturmartillerie* had to be content with the *Sturmgeschütz*.

Thus with the Jagdpanzer IV, an improved *Sturmgeschütz*, which had an improved sloping superstructure providing in increased level of protection for the crew, entered service. Initially the 7.5cm KwK 40 L/48 gun was installed, but later versions (Panzer IV/70 [A] and [V]) mounted the 7.5cm KwK 42 L/70 gun as used for PzKpfw V Panther.

Interestingly, development of the well-known *Jagdpanser* commenced under the designation '8.8cm *Sturmgeschütz* 42', and the later *Jagdtiger* under '*schweres Sturmgeschütz mit 12.8cm Kanone*'.

Heavy bombing of the Alkett factory at the end of 1943 destroyed vital parts of the StuG production line which forced planners to reactivate earlier plans to utilize the PzKpfw IV chassis. The resulting vehicle was the StuG IV, and nearly all were delivered to tank destroyer units. The older type was designated StuG III and remained in production until 1945.

In 1944, a new *leichter Panzerjäger* (le PzJg) was developed using the chassis and running gear of the obsolete PzKpfw 38(t). This vehicle, the le PzJg 38 *Hetzer* (Baiter), was issued to *Panzerjäger* companies and some StuGBrig.

Identification

My research for this book has been based on wartime documentation only, much of which is stored in the archives of NARA and Bundesarchiv/Militärarchiv and others. Original and relevant photographs are important to support the text, but the choice of such material is not without problems. Having collected thousands of images of *Sturmgeschütz* over the past decades, I have always tried to assign the vehicle shown to its respective unit; I must admit that identification has been only 20 or 25 per cent successful.

Where photographs have been found in surviving albums assembled by veterans or private collectors, clear identification can be made with much greater certainty. If a unit badge is visible the task is easy, but such

A *Leutnant* from PzJgKp 1021 in 21. *Luftwaffe Felddivision* (LwFeldDiv – air force field division) stands beside a *Sturmgeschütz* from the unit. After the crew had camouflaged the vehicle with whitewash, they welded metal rods around the commander's cupola to allow the application of concrete for extra protection. (Anderson)





distinguishing features are not always visible. Furthermore, investigation was made more complicated due to the fact that many units never used a specific emblem, or they were not applied.

If an identified unit fitted some specific alterations or modifications to their vehicles, then this can be also be used when identifying images. A fine example of this are the different types of lamp guard fitted by the workshops in some units, and these distinctive features provide reliable identification of a number *Sturmgeschütz* batteries or battalions. Unfortunately not all units introduced such modifications, or there was not time to fit them on the battlefield. For instance, lamp guards were fitted during a short period which ended late 1941.

In late 1942, a growing number of *Sturmgeschütz* were beginning to be issued to tank destroyer detachments in *Luftwaffe* and infantry divisions; later to tank units. A number of these units were equipped with only 14 or even ten *Sturmgeschütz*, making identification virtually impossible.

A *Sturmgeschütz* Ausf G from Lw-PzDiv Hermann Göring has been fitted with smoke candle dischargers. In Italy, the *Sturmgeschütz* was highly-valued by crews fighting Allied armour, but was dogged by mechanical reliability; particularly the delicate final drive units. The small box on the track cover, which was normally fixed on the engine deck, contained the track tools. (Anderson)

Thomas Anderson
July 2017



An instructor lectures personnel of a *Luftwaffe* field unit on how to recognize and attack Soviet tanks by using a scale model of each type currently in service. (Anderson)





Waffen-SS 1

From the very first beginnings of the '*Bewegung*' (the Nazi movement), Hitler relied on paramilitary units. Most noticeable of these in the 1920s was the *Sturmabteilung* (SA) – a band of thugs which provided a 'security' service during the first public appearances of Adolf Hitler – commanded by Ernst Röhm. In parallel to the SA the *Schutzstaffel* (SS) was created, a protection guard for Hitler and other leading member of the *Nationalsozialistische Deutsche Arbeiterpartei* (NSDAP – Nazi party). While the SS initially remained a small and elite organization, the SA quickly expanded. During the early 1930s, the tasks of the SA were quickly broadened to spreading terror to undermine public order and to intimidate dissenters. Personal animosities soon led to rising tensions between the SA leadership and the NSDAP. While Hitler was certain of seizing power by 'democratic' means, the SA preferred violence and endorsed a military coup. History shows that Hitler achieved his aim in 1932 in a quasi-democratic election, which was accompanied by almost civil war conditions. These were mainly promoted by the SA, which at that time had more than 200,000 members.

***Sturmgeschütz* for the Waffen-SS**

It is difficult to determine when exactly Hitler changed his attitude towards the SA. Despite the strong and possibly decisive support it gave, the now Führer finally decided to neutralize the organization. In the so-called 'Röhm-Coup', the SA leadership was put down in July 1934 and many, including Röhm, were executed by men of the *Schutzstaffel*.

Soon after Hitler became Führer he began to take measures aimed at depriving the Reichstag, the elected parliament, of its powers.

In Hitler's eyes the *Reichswehr* formed a last obstacle to his claim for absolute power, and although the armed forces were led by strictly apolitical officers, Hitler had an obsessive mistrust of the military.

Surrounded by SS-officers, *Reichsführer*-SS Heinrich Himmler inspects one of the first *Sturmgeschütz* Auf A issued to *Sturmabatterie* Leibstandarte-SS Adolf Hitler (LSSAH). Himmler was eager to assemble a political army and Waffen-SS units attracted his particular attention; many were to receive privileged treatment. (NARA)



In March 1943, SS-PzGrenDiv Das Reich (DR) was in combat in the vicinity of Kharkov. A *Sturmgeschütz* Ausf G (from the December 1942 production batch), has the tactical mark stencilled on the glacis plate identifying it as a vehicle from 2. Batterie (StuGAbt). Note the ventilator mounted on the top of the superstructure. A *Maschinengewehr* 42 (MG – machine gun) is carried but without a gun shield. (Anderson)

In summer 1934 Adolf Hitler, as a first step, laid claim to being the supreme commander of the armed forces, and all servicemen were forced to swear an oath to their Führer. The *Reichswehr* became the *Deutsche Wehrmacht* (German armed forces) which supported Hitler and his government, but his paranoia would lead to the slow conversion of the SS to a political army – loyal soldiers devoted to their Führer. By August 1938, the armed elements of the SS had been formed as an elite division, and a year later the term Waffen-SS emerged. In a *Führererlass* (Führer decree) dated August 1938, Hitler authorized the establishment of the first fully-armed SS infantry division – *Leibstandarte-SS Adolf Hitler* (LSSAH).

On 16 October 1939 a second unit, the SS-Division Totenkopf was established, and this was followed by the SS-*Verfügungsddivision* on 1 April 1940. In parallel to these units, the SS-based *Ordnungspolizei* (Order Police) was authorized to form a dedicated SS-*Polizeidivision*.

In a letter dated 17 April 1940, *Reichsführer*-SS Heinrich Himmler informed Generaloberst Walther von Brauchitsch, the commander-in-chief of the army:



Herr Generaloberst

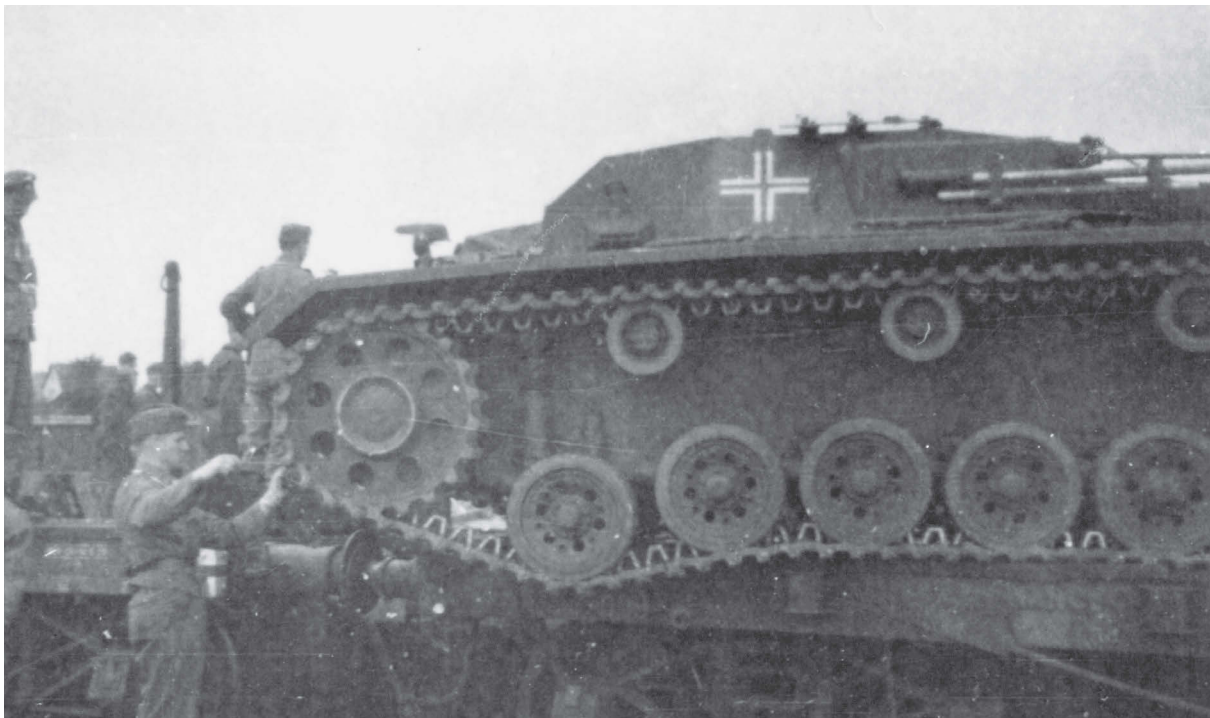
Despite our conclusions agreed at the meeting on 8 April 1940, I send the promised letter today.

- 1) Based on today's population of some 82,000,000, and the eligible *Volksdeutsche* [people of pure German origin], I do not plan to establish any further units other than the Leibstandarte-SS Adolf Hitler, the *Verfügungsddivision*, the SS-Division Totenkopf and the SS-Polizeidivision.

In case the Germanic countries [Scandinavia, Finland and the Netherlands] will prove to be able to recruit SS-suitable men, and also racially suited and indoctrinating politically reliable volunteers in the future... the establishment of new units can be possible without affecting the overall quota of German conscripts.

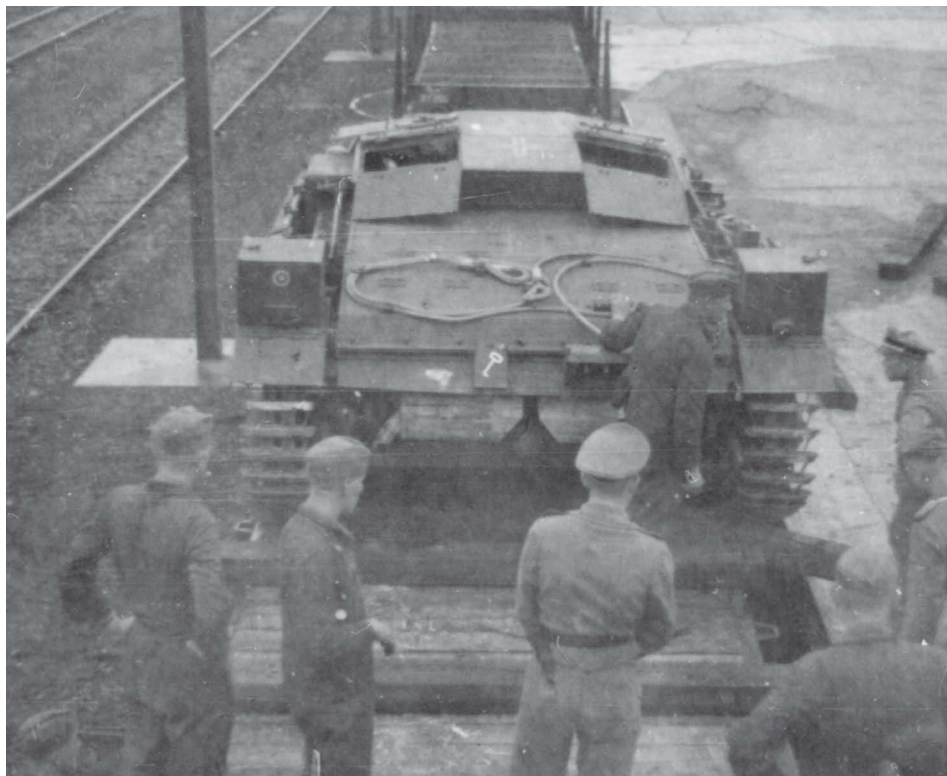
The above statement warrants no further comment. History would show that more and more Waffen-SS units were to be established during the course of the war, a significant number manned by foreign volunteers.

A *Sturmgeschütz* Ausf A from StuGBtr Leibstandarte-SS Adolf Hitler; the last four of six vehicles from the first production batch were issued to this unit, proving privileged treatment. The StuG is fitted with the narrow 38cm tracks and road wheels. (NARA)



Above: A *Sturmgeschütz* Ausf. A being loaded on a railway wagon before being transported to front-line units; even a small error by the driver could cause the 20-ton StuG to topple off the wagon. (NARA)

Right: This StuG carries the markings used by *Leibstandarte-SS Adolf Hitler* in 1940; a thin, outlined white *Balkenkreuze* was applied to the sides and the top of the superstructure. Also the unit's distinctive key symbol was stencilled on the front and rear. (NARA)



The combat history of the *Sturmgeschütz* (within the *Sturmartillerie*) commenced in 1940 when five small detachments were declared combat ready in time for Fall Gelb (Plan Yellow); the invasion of France. Under command of the artillery, these *Sturm batterien* (StuGBtr – assault batteries), were semi-independent units each equipped with six *Sturmgeschütz*, attached to various infantry divisions and deployed according to tactical requirements.

In January 1940, production of the *Sturmgeschütz* began but at a very slow pace and by May only 30 had been produced, exactly the number required for equipping five *Sturm batterien*.

However, a short time before the invasion of France, *Reichsführer-SS* Himmler intervened. At that time the expansion the SS had been decided, and three the *Standarten* (regiments) Deutschland, Germania and Der Führer were combine into the Leibstandarte-SS Adolf Hitler (LSSAH). In December 1939, the term Waffen-SS was used officially for the first time. Himmler demanded the creation of SS-*Sturm batterien*, and equipped exactly the same as units in the *Sturmartillerie*.

Three StuG crewmen from StuBtr LSSAH in France during summer 1940. At the left is a *Schütze* (private), centre an *Oberscharführer* (staff sergeant), possibly the vehicle commander, and right an *Unterscharführer* (NCO). (NARA)





On 25 April 1940, orders were given by the *Oberkommando des Heeres* (ObdH):

- 1) The commander of the *Artillerie Schule* [artillery school] is herewith ordered to establish an SS *Sturmbatterie* according to KStN 445 dated 1 November 1939.
- 2) Establishment: 20 May 1940
Combat readiness: 20 June 1940
- 3) *Reichsführer*-SS will be in command of the required SS leaders, subordinate commanders and enlisted men.
Date of arrival: 14 April 1940 at 18.00hrs.
- 4) Weapons, equipment and soft-skinned vehicles will be issued by *Sonderverfügung* [special decree] of the Chief of Ordnance department.

On 7 May 1940, the ObdH wrote to Himmler:



SS infantry, supported by a StuG from StuBtr LSSAH, slowly advances during the initial phase of *Unternehmen* (Operation) Barbarossa. A Soviet Komsomoletz heavy gun tractor towing a 45mm anti-tank gun burns after being hit. (Anderson)

Herr Reichsführer

I acknowledge receipt of your letter, and herewith wish to explain my statement:

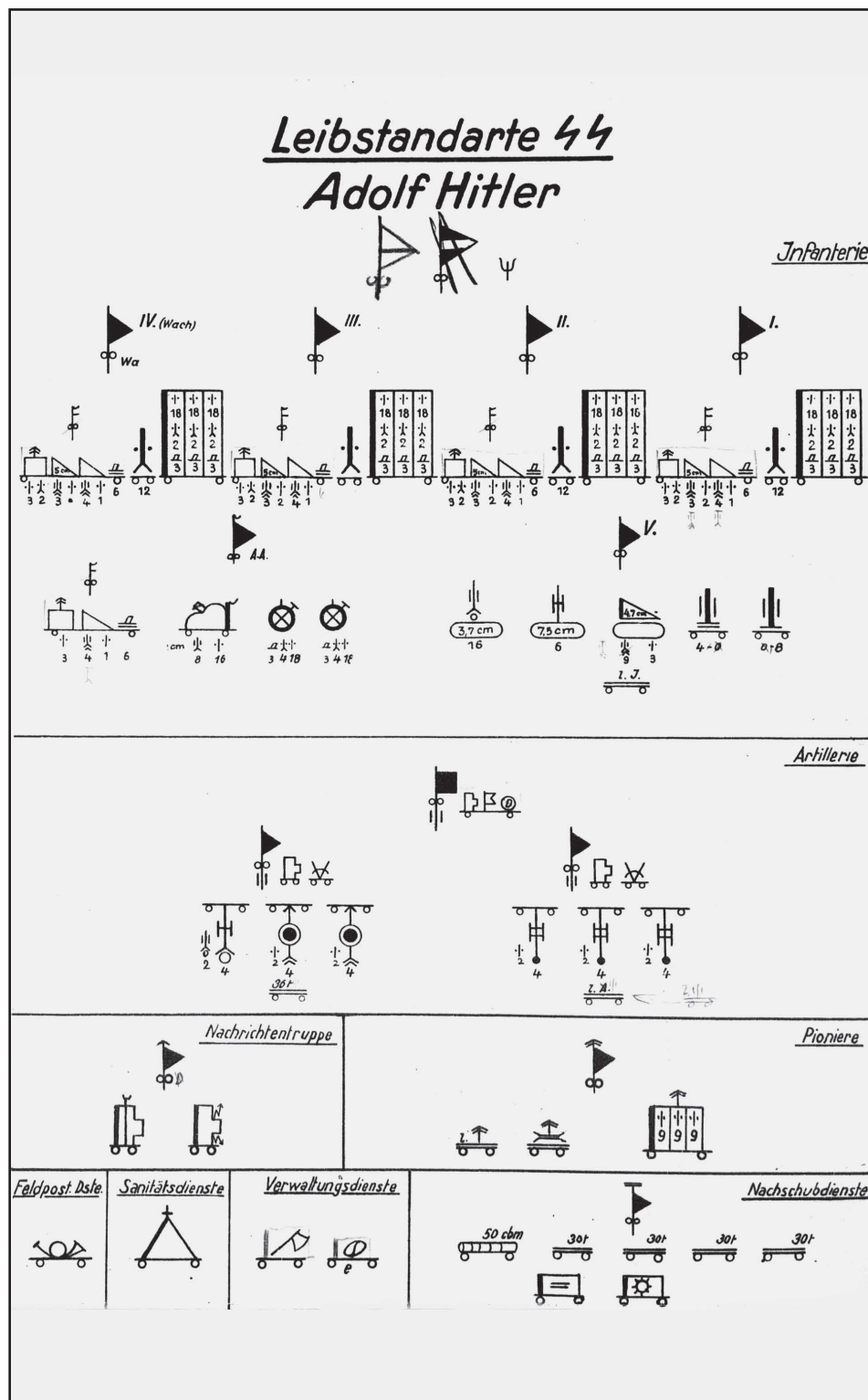
As for paragraph 1:

The establishment of SS-*Verfügungsstandarte* Nordland has been ordered by the Führer on 10 April 1940. This regiment will receive light weapons and machine guns for one battalion. In contrast to that, it is at present not possible to equip the unit with light and heavy mortars and also soft-skinned vehicles, due to the difficult situation with replacements.

As for paragraph 2:

f) The *Sturmabatterie* for the Leibstandarte-SS Adolf Hitler will be established at the artillery school, Jüterbog as follows... In the first instance the battery

The order of battle for Leibstandarte-SS Adolf Hitler, dated February 1941, noted a *Sturmatterie* equipped with six *Sturmgeschütz* integrated in the *V. Abteilung* (tank destroyer battalion). A short time later, the term *Batterie* (battery) was substituted for *Kompanie* (company). (Anderson)





will receive (as will all other batteries to be established by the army) only four *Geschütze* [StuG].

This letter confirms the difficult supply situation with new equipment due to a desperate shortage of raw materials and an inefficient armaments industry, which had not been sufficiently prepared for the war. The temporary reduction to four *Sturmgeschütz* for each newly established *Sturmatterie* is interesting, but cannot be confirmed.

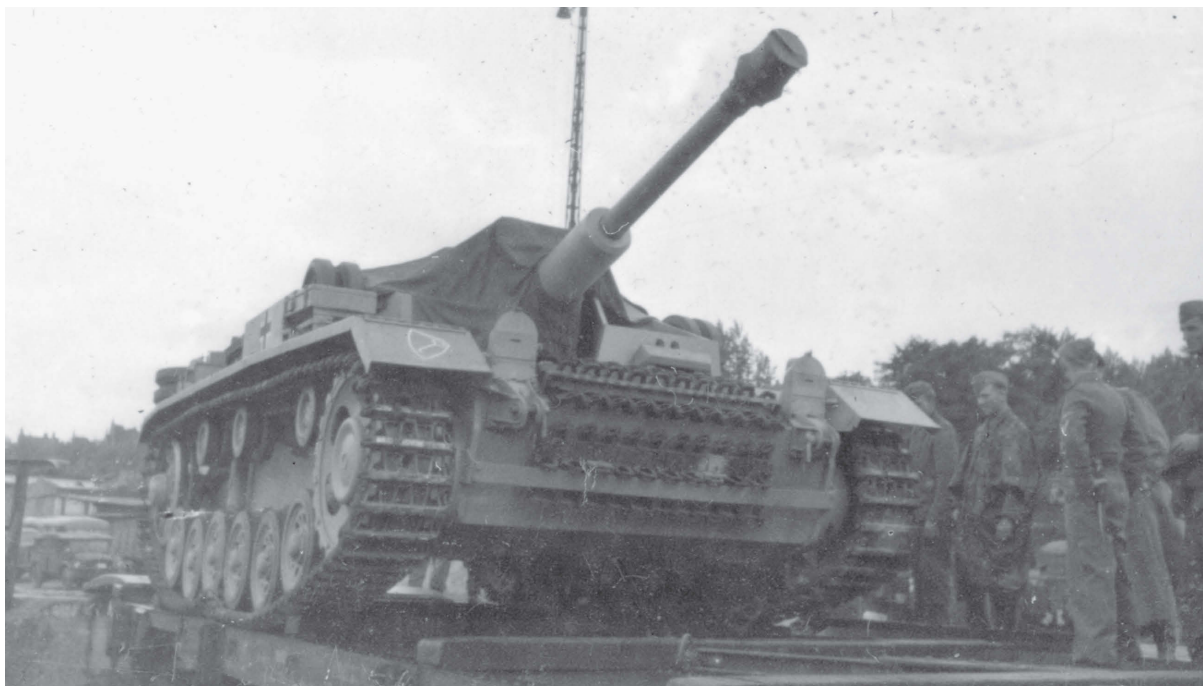
However, with the establishment of Waffen-SS units the long history of *Sonderverfügungen* began. This was nothing more than the Waffen-SS receiving preferential treatment in regard to the supply of equipment.

The commander of a StuG had a *Scherenfernrohr* (scissors-type periscope) to observe the battlefield, which could only be used through an open hatch. A number of StuG commanders were killed by shrapnel or by a sniper: from early 1943 all production StuGs were fitted with a cupola for the commander. (NARA)

Leibstandarte-SS Adolf Hitler

To obtain *Sturmgeschütz* for the first SS *Sturmatterie*, the planned establishment of *Sturmatterie* 666 had to be postponed. On 16 May 1940 the OKH ordered that due to the difficult supply situation, the establishment of *Sturmatterie* 666 was to be moved to 17 June 1940, and the unit was to be combat ready by 17 July.

The *Sturmgeschützatterie* in LSSAH was organized according to *Sturmartillerie* standards. By coincidence the same organizational structures were adopted, in this case *Kriegsstärkenachweisung* (KStN – table of organization) 445 dated 1 November 1939. Due to its late establishment



By mid-1942, the *Sturmgeschütz* Ausf F was becoming available in slowly increasing numbers. It mounted the long-barrelled 7.5cm *Sturmkanone* (StuK) 40 L/43, (later L/48), which gave German forces a weapon capable of defeating the modern Soviet tanks. (NARA)

LSSAH *Sturmbatterie* did not see combat during the invasion of France, but remained in Germany to undertake further training on the new and unfamiliar StuG.

After the fall of France, LSSAH was reinforced (the unit was given the prefix *verstärkt* [strengthened]) and brought up to the strength of a motorized infantry brigade, despite being designated as a division. The infantry elements consisted of four ineffectual battalions equipped with only light weapons. A fifth infantry battalion comprised the support weapons, a *Flugzeugabwehrkanone* (FlaK – anti-aircraft gun) company with 16 SdKfz 6/2 (3.7cm FlaK self-propelled [SP] guns), a tank destroyer company with nine 4.7cm PaK (Sfl) on PzKpfw I, two infantry artillery companies (7.5cm *leichte Infanteriegeschütz* [le IG – light infantry gun] and 15cm *schweres Infanteriegeschütz* [sIG – heavy infantry gun]), and finally the *Sturmbatterie* with six *Sturmgeschütz*. These support echelons were divided to suit the combat to the requirements of the infantry battalions. Further support units (reconnaissance, artillery, pioneers, signals and supply convoy) completed the division.

During the invasion of Greece, LSSAH (and Das Reich) were deployed as part of the occupation forces, but due to them having little combat experience they were at first used as reserve troops. Respective after-action reports regarding usage of SS *Sturmgeschütz* are not available as the detachments were too small. However, it is most probable that the SS assault guns were used as intended to support infantry assaults by eliminating enemy strongpoints when required. LSSAH *Sturmgeschütz* formed part of the German victory parade in Athens.



During the first month of the invasion of Russia, LSSAH advanced to Kiev, Uman and Perekop, before turning east to Rostov on the River Don. A short time after capturing Rostov, the city had to be abandoned during the winter and LSSAH retreated to positions near Taganrog, which were held until May 1942. Earlier in February, SS-*Führungshauptamt* (supreme executive office) had decided to reinforce the unit in the field. Two StuG batteries, which were then called *Infanteriegeschütz-Kompanie* (InfStuGKp – infantry assault gun company [see below]) were used to form a *Sturmgeschützabteilung* (StuGAbt – assault gun battalion) with 22 vehicles; the existing battery was also reorganized to this standard.

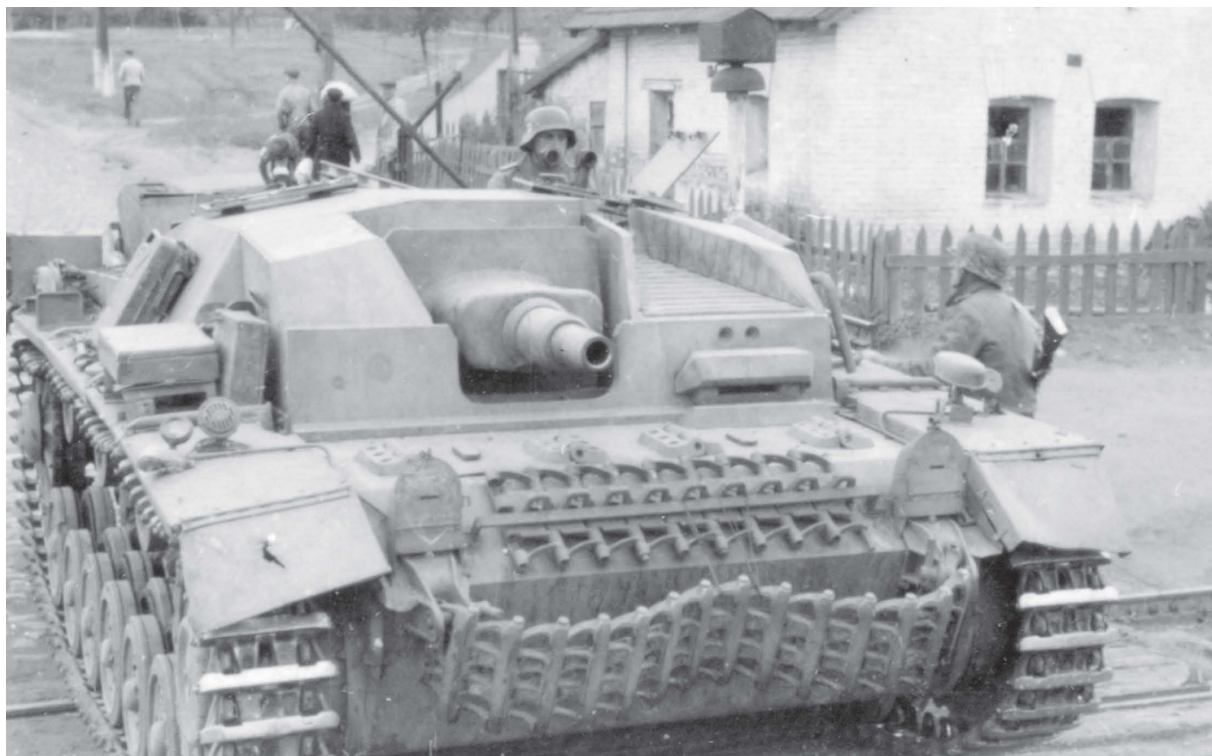
The weakened LSSAH was then used for coastal defence in Mariupol, before being sent to France for refitting in July 1942. As noted in later tables of organization, the StuGAbt in LSSAH was still authorized to have 22 assault guns. After a short deployment to Toulon, France, LSSAH was again sent east to Kharkov in early 1943.

A column of carefully whitewashed *Sturmgeschütz* from 2.SS-PzGrenDiv Das Reich in the spring of 1943; the lead vehicle is an Ausf G from the December 1942 production batch, and has the temporary unit badge introduced for *Unternehmen Zitadelle* (Operation Citadel). (Anderson)

Organization of Early SS *Sturmgeschütz* Units

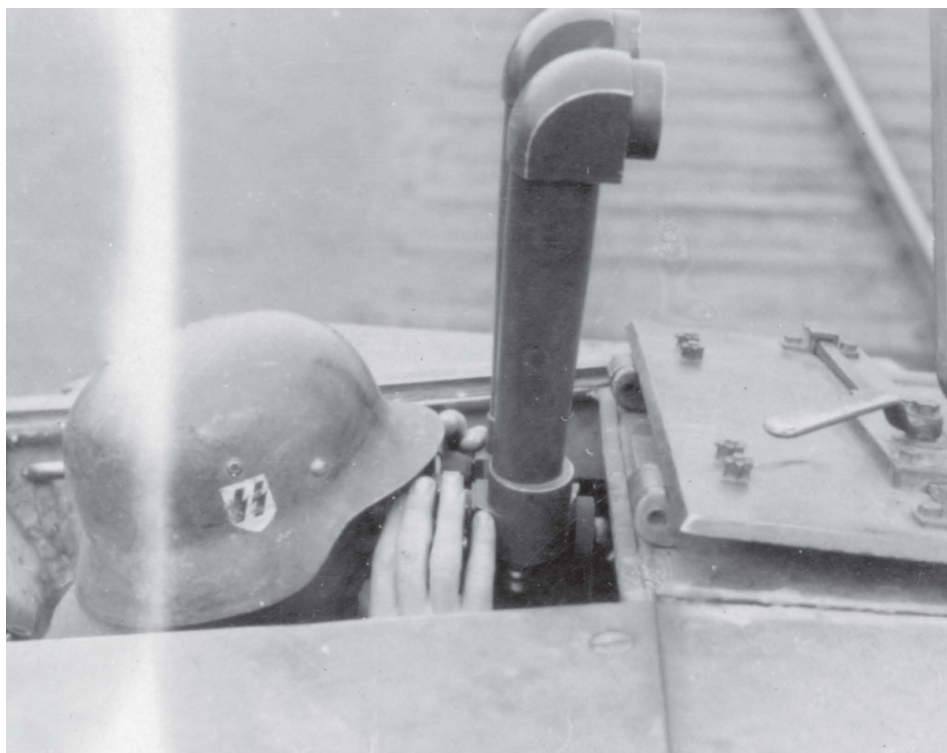
At the beginning of their service life, *Sturmgeschütz* were organized as small batteries of six assault guns, plus command, support and supply vehicles. Quite understandably, this structure (KStN 445) was also adopted for the first Waffen-SS StuG battery.

By mid-1941 production of *Sturmgeschütz* had reached a level which allowed a battery commander to have a dedicated *Sturmgeschütz*, replacing



Above: The headlights on early StuGs had thin protective covers which, when closed, worked as blackouts for night marches. A *Notek Nachtmarsch-Gerät* (night-driving lamp), visible on the right-hand side track guard, has been turned backwards to prevent it being damaged. (NARA)

Right: In theory the *Scherenfernrohr* (scissors-type periscope) could be rotated through 360°, but in practice the cramped interior conditions made this impossible for the commander. (NARA)





Above: A *Sturmgeschütz* from 3.SS-PzGrenDiv Totenkopf (Death's Head) has been immobilized by a damaged track, possibly after striking a Soviet anti-tank mine. The unit's distinctive emblem, a black rectangle with a white skull, has been stencilled on the glacis plate. (von Aufsess)



Right: A column of *Sturmgeschütz* from 2.SS-PzGrenDiv Das Reich drive through a destroyed town on the Eastern Front in 1941; the unit's distinctive emblem a *Wolfsangel* (a Runic symbol) has been stencilled on the flap of the right-hand track guard. On the left flap a white letter 'G' – Guderian – indicates that the unit was part of *Panzergruppe 2*. (Anderson)



High-ranking army officers inspect one of the first 7.5cm StuK 40 L/43-armed StuG Ausf F/8 issued to 1.SS-PzGrenDiv LSSAH in the summer of 1942. The vehicle has been painted in tropical camouflage at the factory. (NARA)

the *leichte gepanzerte Beobachtungswagen* (le gep BeobKw – light armoured observation vehicle) *Sonderkraftfahrzeug* (SdKfz – special purpose vehicle) 253. This was introduced in table of organization KStN 446 and welcomed by all active StuG units. An alternative version of the table, KStN 446a, even authorized the provision of single platoons each with either two or three assault guns, depending on the situation and availability. This measure allowed the establishment of batteries with seven or ten assault guns, and also made provision for each Zug (platoon) leader to have a *Sturmgeschütz*.

With creation of more Waffen-SS units, it was decided to provide them all with integrated *Sturmgeschütz* detachments. This was more than that provided for all existing army infantry divisions. However, there is no indication that more than six assault guns were ever authorized for each SS-StuGBtr in 1941.

By summer 1940, the *Sturmartillerie* had established battalion-size units with three batteries formed with six or seven *Sturmgeschütz* each (as noted in the relevant artillery KStN). As noted earlier, these units were deployed on *Heerestruppen* (army troop) level, and were allotted to infantry units as and when required at points of main effort. In 1940 only one army unit, InfRgt Grossdeutschland was allowed to keep *Sturmatterie* 640 with six *Sturmgeschütz* as an integrated element.

In late 1941 decisions were taken to enhance the combat value of the SS-Divisions; infantry elements were authorized to be reinforced with six instead of four battalions organized in two regiments. The units also received a *Panzerabteilung* (PzAbt – tank battalion) formed of three companies. A significant improvement to their fighting power was achieved by enlarging the *Sturmgeschütz* detachment to a battalion with three batteries. However, all the above did not happen immediately.

The LSSAH was the first unit to be authorized to have a StuGAbt. However, careful examination of the organization shows an anomaly. While the staff and staff battery relied on the common artillery structures KStN 416 (Staff Section in a StuGAbt) and KStN 588 (Staff Battery in a StuGAbt), the three combat batteries, previously established according KStN 446, followed a new structure. By the end of 1941, a further KStN was produced for usage of *Sturmgeschütz* within infantry formations. The reason for this measure is unknown. This KStN 190 InfStuGKp (Sfl) (*Selbstfahrlafette* – self-propelled), dated 1 November 1941 resembled the

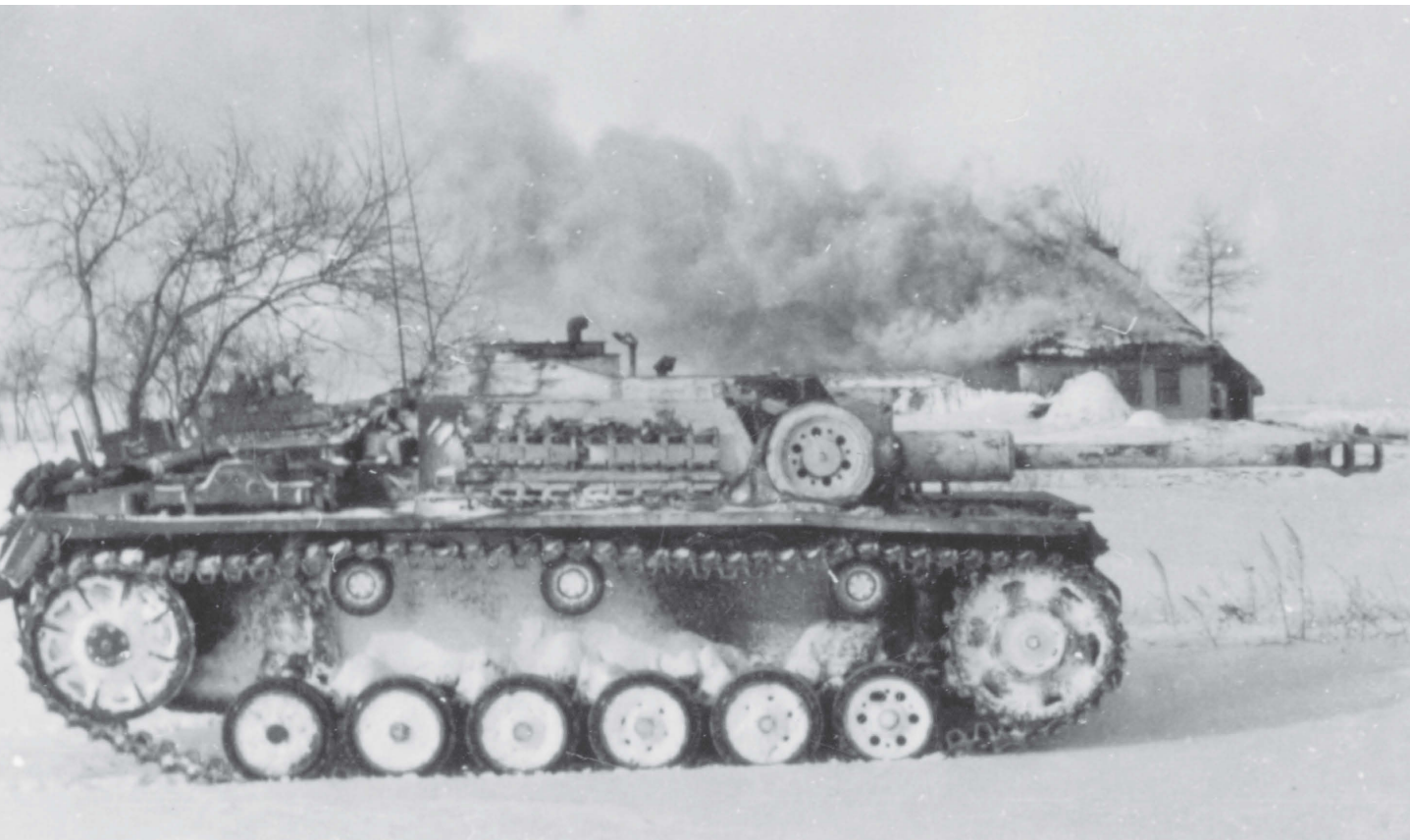
The sloped sides of the superstructure, on both sides of the gun, had a number of bullet traps. StuG crews saw them as a distinct hazard and filled the gaps with concrete or track links. (NARA)



The crew of a *Sturmgeschütz* Ausf F/8 unloads spent shell cases; the vehicle has been camouflaged, with patches of whitewash painted over the original dark grey, to blend into the snow covered sparsely-wooded terrain. The tank crew and grenadiers are wearing reversible winter uniforms; a serious shortage during the first *Kriegswinter* (winter war) caused many problems. (Anderson)







A *Sturmgeschütz* Ausf. G, armed with the 7.5cm StuK 40 L/4 from the December 1942 production batch, passing a farmhouse set on fire by retreating Soviet forces. The crew has used spare track and running wheels to provide some additional protection and also block bullet traps. (Anderson)

previous artillery KStN 446, indeed only a few differences can be noted. A possible explanation for this could be that *Kriegsarsrüstungsnachtweis* (KAN – table of allowances) associated with the KStN 190 matched with the rest of the division's equipment. But this does not explain why the staff and staff battery were still organized according to artillery structures.

With the above changes, the four Waffen-SS divisions had been practically improved to *Panzergranadierdivisionen* (PzGrenDiv – armoured infantry divisions) standard, despite keeping their original names. Again this shows how preference was given Waffen-SS units for the allotment of men and equipment.

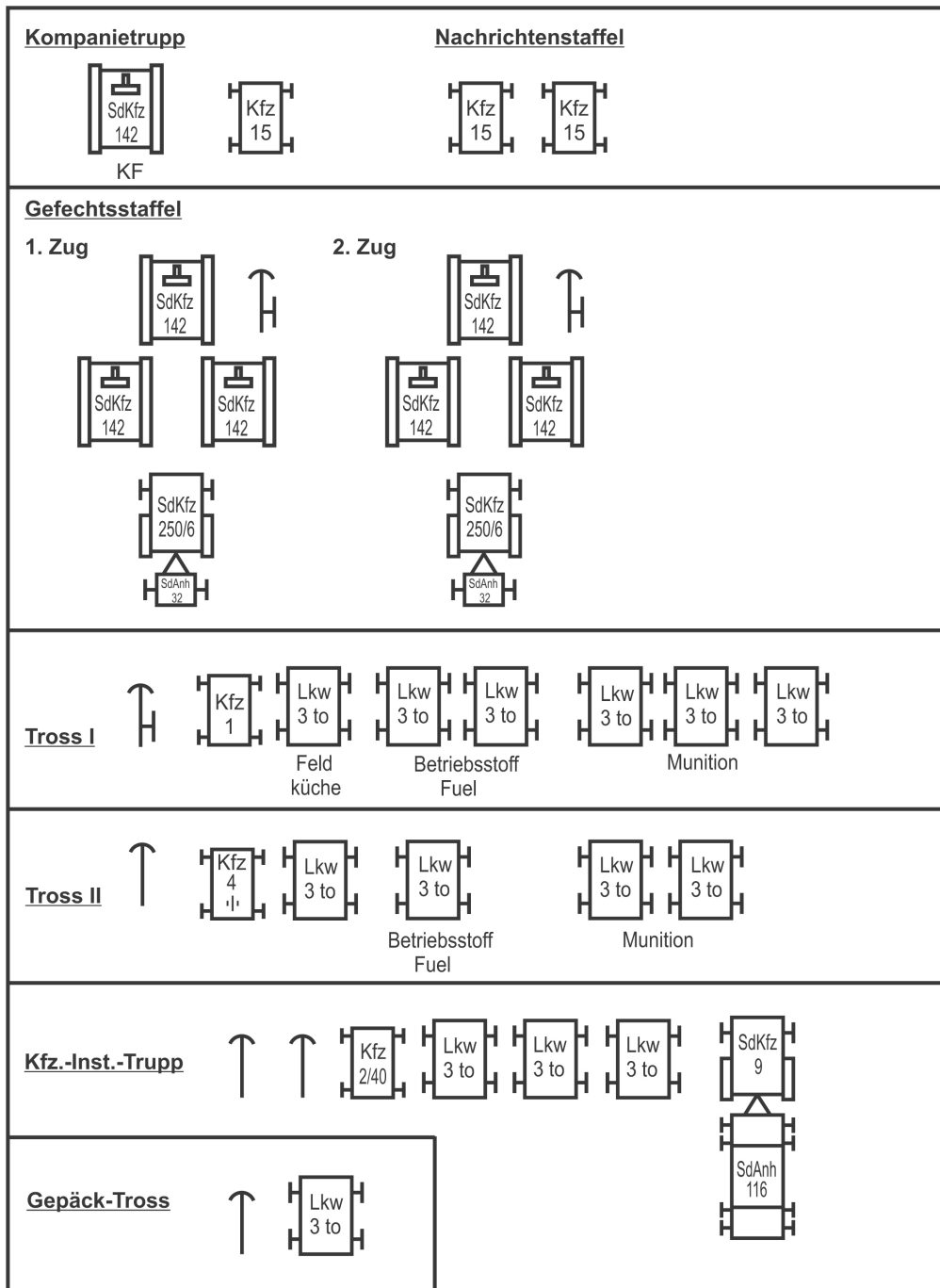
Available documents show that LSSAH, Totenkopf, Das Reich and Wiking had, in some detail, deviated from the organizational structures. This was most probably due to the supply situation and the implementation of these orders took place over a long period.

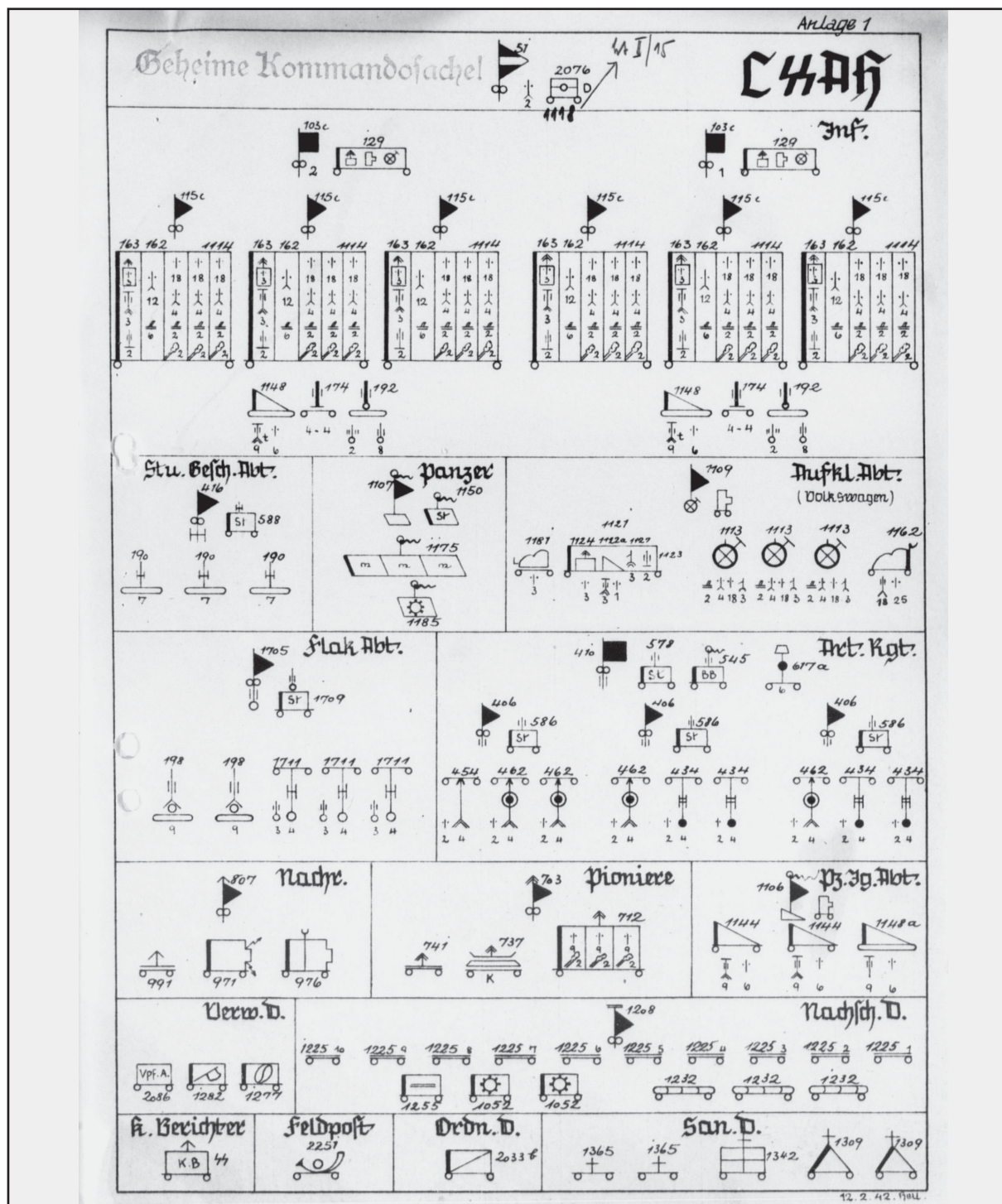
The organizational structure for LSSAH, dated February 1942, can only be used as an indication.

In November 1942, the SS-*Führungshauptamt* finally announced that it would be renaming the SS units. By *Führerbefehl* (Führer command) the four main SS units were declared as Panzer grenadier divisions.

Infantry *Sturmgeschütz* Company (Sfl)

Table of organization according to KStN 190, dated 1 November 1941.





A year later the assault gun element in LSSAH was expanded to a complete *Abteilung* (battalion) with 21 *Sturmgeschütz* formed as three companies. (Anderson)



Das Reich

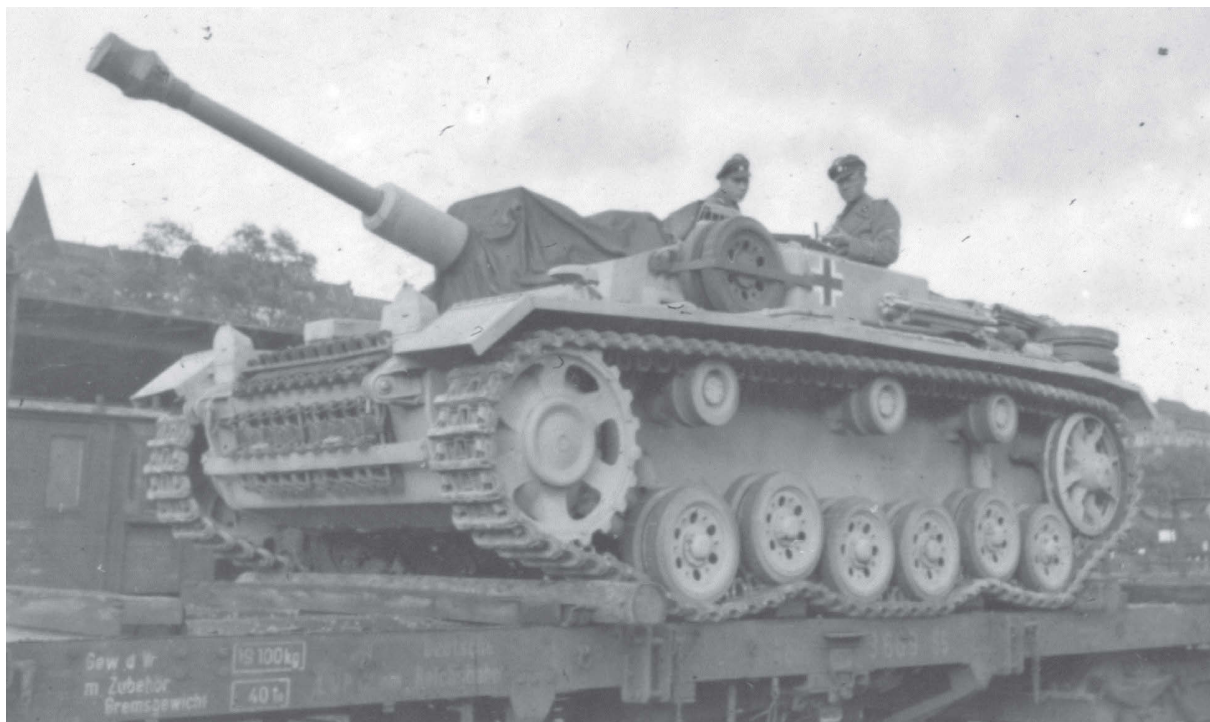
In December 1940, a second Waffen-SS unit was officially established when *SS-Verfügungsddivision* was renamed as SS-Division Das Reich. The organizational structure differed from that of LSSAH; by having three regiments SS Das Reich had a much stronger infantry. In late 1940, the unit was positioned in France preparing for *Unternehmen Seelöwe* (Operation Sea Lion) the planned invasion of Great Britain.

On 14 January 1941 orders were given to establish a *Sturmatterie* for the division; not as a sub-unit as it was listed separately. In April 1941, Das Reich was deployed to the Balkans for the invasion of Yugoslavia.

During the early days of Operation Barbarossa, Das Reich fought in the central sector and advanced towards Moscow. During the winter of 1941/42, a series of heavy counterattacks by the Red Army forced the unit to retreat. In February 1942, parts of the battle-worn unit were sent back to Germany for refitting, while remnants fought as part of a battle group before returning home in June 1942.

After having been reformed to almost PzGrenDiv standard, Das Reich was then sent to France. After refitting, their *Sturmgeschütz* detachment had been increased to a battalion formed of three batteries each with seven assault guns, as detailed in KStN 446. Documents note an SS-StugAbt 2 (beside

The lack of an integral close-defence weapon was a serious problem for StuG crews defending against Soviet anti-tank teams and other infantry. Many earlier versions were fitted with a simple pintle-type mounting for a *Machinengewehr* 34. In the early part of 1943 production vehicles began to be fitted with a mounting protected by an armour. (NARA)



This new *Sturmgeschütz* of 1.SS-PzGrenDiv LSSAH has been loaded on a railway wagon ready to be delivered to German forces fighting on the Eastern Front. A large tarpaulin covers the top of the vehicle and gun mantlet. The muzzle brake is protected by a fitted cover. (NARA).

the SS-PzAbt 2), proving that there was no standardized designation system for SS units, a fact that leads to some confusion. The *SS-Führungshauptamt* would change this in late 1943, when a more exact numbering system for Waffen-SS units was introduced.

In November 1942, SS-Division Das Reich was renamed as PzGrenDiv Das Reich, and in January 1943 it was transferred east to Kharkov.

Totenkopf (Death's Head)

In October 1939, SS-Division Totenkopf was established using concentration camp personnel. The unit saw action during the western campaign, fighting through The Low Countries and into France.

On 14 June 1941, a third SS-*Sturmgeschütz*batterie was established and attached to SS-Division Totenkopf. The division saw action in the Baltic region, before advancing to Dno (Pskov Oblast) and Staraya Russa.

During the winter of 1941, the division was engaged in heavy fighting around Demyansk, where large elements of the unit were annihilated. After the successful breakout in April 1942, what remained of the battle-worn division was positioned in the northern part of the Eastern Front. In October 1942, the division was sent to France for rest and re-equipment, where the unit was issued with a StuGAbt with 21 *Sturmgeschütz*.

In January 1943, the renamed SS-PzGrenDiv Totenkopf was deployed to Kharkov on the Eastern Front.

Wiking (Viking)

In November 1940, SS-Division Wiking was established. In June 1941, the unit was ordered east to support the German forces fighting in the southern sector of the Eastern Front. At the time the division was not equipped with *Sturmgeschütz*, but in October 1941 the unit was allotted a StuGBtr, organized according the current artillery-type KStN 446 dated 18 April 1941. The division was to suffer heavy losses in the ensuing battles.

In March 1942, the battery was reorganized as an InfStuGKp (Sfl) (KStN 190), but there is no information available detailing these changes. The company was subsequently attached to LSSAH, leaving Wiking without *Sturmgeschütz*. In August 1942, an *SS-Führungshauptamt* ordered the establishment of a new StuGBtr, once again organized according KStN 446. Unfortunately there is no information available.

The combat ability had been severely weakened, which was exacerbated (according to some sources) by the inability to recruit enough 'Germanic' volunteers. Apparently it was also not possible to provide Wiking with sufficient well-trained non-commissioned officers, a problem familiar to the other SS units.

The crew of a *Sturmgeschütz* from 8.SS-Kavallerie-Division (Cavalry Division) greet men of the mounted infantry in the division. (Anderson)





The crew of this StuG Ausf G has captured a number of Soviet soldiers, who are sitting on the engine deck waiting to be taken back to German lines. The roof ventilator which was prone to damage from bullets and shrapnel was moved to the rear on all vehicles built in 1943. (Anderson)

Regarding the equipment situation, Waffen-SS units were well-supplied in comparison to their army comrades. In September 1942, Himmler mentioned an order from Hitler to provide Wiking, along with the other larger SS formations, with a further PzAbt, resulting in two regiments each with four battalions. This letter also described the efforts to equip the units with a StuGAbt.

Finally in March 1943, the division now renamed as SS-PzGrenDiv Wiking received a StuGAbt. The combat batteries were organized according KStN 446a, and were authorized to have ten *Sturmgeschütz* each.

Equipment

The first SS-StuGBttr was equipped with up to six (some sources say four) *Sturmgeschütz* Ausf A, but since the first production run is well documented, six seems appropriate.

Up until the end of 1941, only the short-barrelled versions Ausf B, C and D had been delivered. In early 1942, the performance of the main gun in the StuG was being questioned. During the first battles in France and

also the Balkans, the short-barrelled 7.5cm KwK 37 L/24 had proven able to cope with all challenges. Using high-explosive (HE) ammunition, prime targets – enemy machine gun and artillery positions – were eliminated. Occasionally enemy tanks, when encountered, could be defeated by firing armour-piercing (AP) rounds.

The opening weeks of Operation Barbarossa showed that new solutions were necessary after encounters with the T-34 and KV tanks. Among the many measures taken was to mount a longer barrelled gun for the *Sturmgeschütz* and the PzKpfw IV.

The new gun, which for the *Sturmgeschütz* was designated the 7.5cm *Sturmkanone* (StuK) 40 L/43, proved to be capable of defeating Soviet armour. The long-barrelled gun was first mounted in the PzKpfw IV Ausf F2 (an up-gunned Ausf E).

Langrohr (long barrel) *Sturmgeschütz* were normally supplied to units about to be established; however a smaller, but increasing number were being sent as replacements to front-line units: Result, a mixed inventory. Waffen-SS divisions, which had relatively small detachments, were usually issued with new *Sturmgeschütz* during refitting. Before leaving their front-line positions, normal practice was to transfer their old equipment (StuGs and all types of soft-skinned vehicles) to units remaining at the front.

A column of StuG Ausf G possibly from to 3.SS-PzGrenDiv Totenkopf, the unit's distinctive skull emblem is just visible on the glacis plate. The vehicles are fitted with wider *Winterketten* (winter tracks) which provided better traction in mud or snow-covered terrain. (Anderson)







Troops prepare to attempt the recovery of a StuG which has crashed through thin ice in a marsh. All are StuG Ausf F/8s armed with the 7.5cm StuK 40 L/43; the gun on the first StuG is fitted with a single-baffle muzzle brake. The vehicles are possibly from 3.SS-PzGrenDiv Totenkopf; the unit's skull emblem has been badly painted which makes exact identification difficult. (Anderson)



Luftwaffe Field Divisions 2

The tank destroyer detachments of the *Heereseinheiten* (army, infantry and tank divisions) were vital parts of their mother units, especially for the infantry which lacked any armour. Evolved during the 1930s, their main armament was the 3.7cm *Panzerabwehrkanone* (PaK), which was designed to combat tanks fitted with up to 30mm armour. The gun was light, easy to move and had similar ballistic performance to anti-tank guns then in service with the armies of other nations.

During the invasion of France it became apparent that the 3.7cm PaK was not powerful enough to defeat the majority of French tank types. Deliveries of the more powerful 5cm PaK 38 had begun, albeit at a slow pace, in early summer 1940 and only a few reached front-line troops.

From the launch of Operation Barbarossa, all divisional *Panzerjäger-Abteilungen* (PzJgAbt – tank hunter battalions) came under extreme pressure as the Red Army deployed increasing numbers of T-34 and KV tanks, and all available weapons had to be used to stop this threat. Unfortunately the new 5cm PaK 38 could not defeat the latest Soviet armour, and the 3.7cm PaK could only be used to attack light tanks. On 27 March 1942, *Armeeoberkommando* 2 (AOK 2) summarized the situation on the Eastern Front and submitted a report to *Heeresgruppe Süd* (Army Group South):

1) The earlier provision of anti-tank weapons to the army was, regarding calibre, not sufficient to effectively destroy all types of enemy tank found in Russia. During the winter fighting, it proved necessary to move artillery or 8.8cm *Flugzeugabwehrkanone* (FlaK guns) forward to assist the tank destroyer companies. Newly-designed ammunition allowed troops to combat against enemy tanks with some chance of success. However, the overall situation requires an increase in the calibre of our tank destroyer weapons. As a consequence, this development resulted in an increase in the number of

Sturmgeschütz of PzJgAbt 1014(L); between November and December 1942, four Ausf F/8s were delivered before the unit was incorporated with 14. *Luftwaffe-Felddivision* (LwFeldDiv – air force field division). These vehicles were finished in tropical camouflage despite being sent to Norway, where they remained until October 1943. (Anderson)



The *Sturmgeschütz* of 14.LwFeldDiv were used for field exercises in Norway until being withdrawn. An exercise *Schiedsrichter* (arbitrator), recognizable by the white band around his field cap, is on the engine deck. (Kocsis)

different gun types, many of different calibre. Furthermore, guns from the artillery, 8.8cm FlaK and *Sturmgeschütz* also had to be used.

The assorted problems caused by this great variety of weapons, i.e. training, the different equipment, organization of the tank destroyer units on the battlefield and the ammunition supply are obvious. However, these points shall not be explained here in detail. For example, according to the order from OrgAbt to increase our anti-tank capabilities, a *Panzerjäger-Kompanie* can have up to three different guns in its inventory.

2) The above-mentioned weapons, which are at present available in many variations, are the most effective against tanks. It would be wise to give them back into the hands of the specialists, the artillery. The previously available self-propelled guns delivered to the tank destroyer units are the result of attempts to regain a sufficient mobility. However a better-suited weapon is already available in the shape of the *Sturmgeschütz*, which has proven to be highly effective in the *Ostfeldzug* [eastern campaign]. After the failure of all other defensive weapons, with respect to their inadequate calibre (anti-tank guns in the infantry) or because of poor mobility (le FH and FlaK guns), the *Sturmgeschütz* was often the last armour-defeating weapon combining sufficient calibre and mobility.

These few concise lines repeat and summarize the situation in the German infantry divisions on the Eastern Front after late 1941. With the knowledge that their own towed anti-tank guns were totally inadequate for defeating



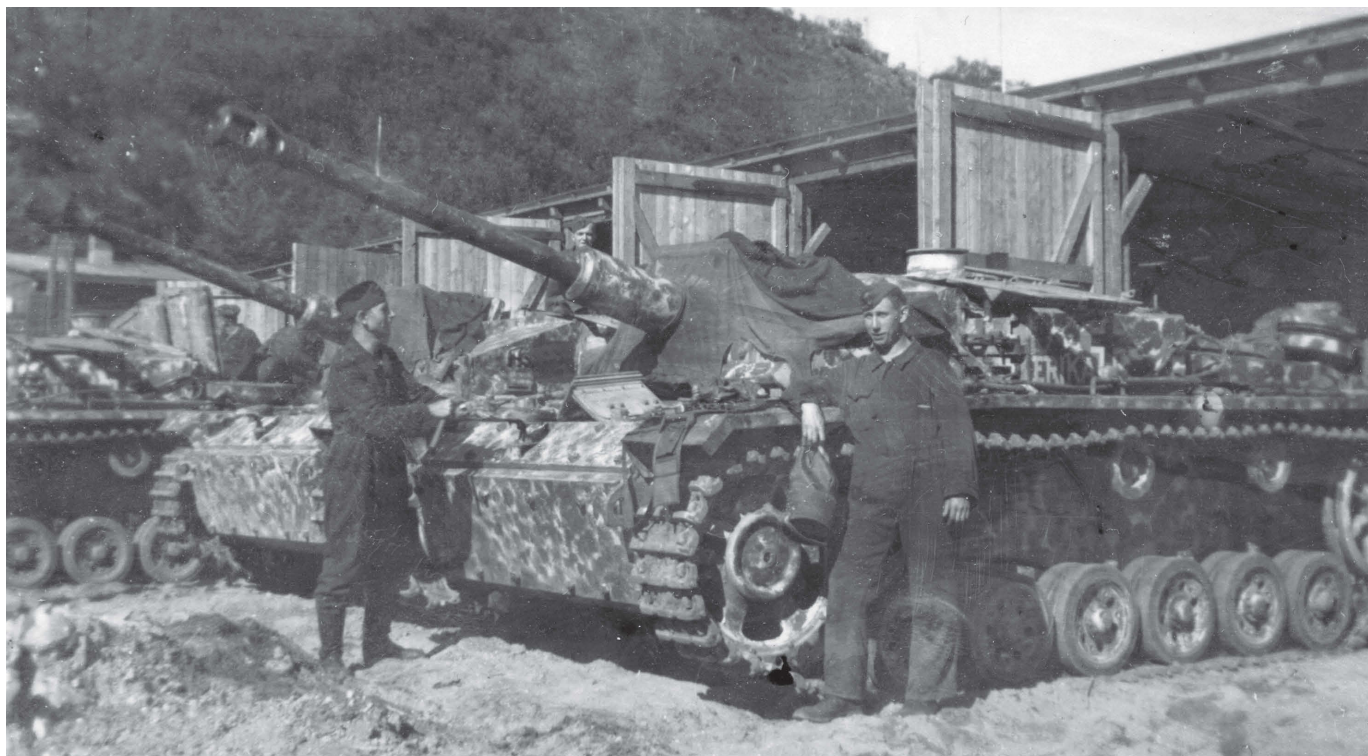
current Soviet armour, conventional artillery and anti-aircraft artillery weapons had to be used; especially light and heavy field guns. Any pieces withdrawn and moved forward left serious gaps in the artillery defences, and there was the logistical problem of moving large quantities of ammunition.

Military planners decided to expedite the development of more effective 7.5cm guns. By early 1942, four different designs for 7.5cm and 7.62cm had been completed with little thought given to a more complicated ammunition supply. Another problem that was underestimated was the inability of German industry to deliver sufficient numbers of tractor units to tow these heavier guns. A logical solution was to mount a number of these new guns on obsolete light tank chassis, resulting in *Selbstfahrlafetten* (Sfl – self-propelled guns).

The unknown writer of the summary came to the conclusion that these self-propelled guns would not be the last word on the subject. He pointed out that the *Sturmgeschütz* would continue to fulfill all requirements and had the advantage of already being available. The report continues:

- 3) The question is as to whether the *Sturmgeschütz* design should be improved:-
 - a) Mount an 8.8cm gun in place of the 7.5cm: This question can be answered after the designers have checked if this is at all feasible.
 - b) Continue to utilize the standard gun mounting or change to a rotating turret: Importantly it should be noted that the extraordinary accuracy of the *Sturmgeschütz* is mainly due to the excellent gun mounting. Also it must be

During the period November 1942 to March 1943, *Sturmgeschütz* were delivered to units painted to suit the deployment. This interesting photograph shows an early production Ausf G from PzJgAbt 1021 (L) finished in *Dunkelgrau* (dark grey). Although the vehicle has a standard superstructure, it is fitted with track guards from the first production batch. (Anderson)



A *Sturmgeschütz* from PzJgAbt 1014 (L) finished in light tropical camouflage which has been 'modified' with patches of a darker colour applied by brush. The name 'Erika' has been painted on the side pannier. The frontal plate had been reinforced to 80mm by bolting on an extra 30mm of armour. (Anderson)

confirmed that a turret-mounted gun will have the same performance before progressing. The principle weakness with the *Sturmgeschütz* – the lack of 360° traverse – has been noted.

c) The firing range has to be increased to 2,000m.

4) We suggest that each division be provided with a *Sturmgeschütz-Abteilung* within the framework of current organizational structures. Thus the division will receive a potent tank destroyer and also an effective infantry escort weapon. It is obvious that an upgrading from 7.5cm to 8.8cm gun will result in a higher kill rate, and needs no further explanation. With assignment of an integral *Sturmgeschütz* element, the [infantry] division will be independent from *Heerestruppen* [army troops]. The previous *Heerestruppen-Sturmgeschütz-Abteilungen* will then be solely available for the creation of points of main efforts. Furthermore, *Heerestruppen-StuGAbt* can substitute the *Heeres-Panzerjäger-Abteilungen* [tank destroyer battalion at army troop level].

The demands noted in item 3, are understandable as *Panzerschock* (tank shock) was still prevalent in troops on the front line. At that time all *Sturmgeschütz* mounted the short-barrel 7.5cm KwK L/24 gun, but the more potent 7.5cm KwK/StuK 40 was entering production and StuGs mounting the weapon would soon be available to front-line units. However, the existent StuG design would not allow installation of a heavy weapon such as the 8.8cm gun.



However, the suggestion of re-designing the StuG as a turreted tank is most interesting. The gun mounting in the StuG was fitted with a periscopic *Zielfernrohr* 1a (ZF – sighting telescope) gunsight which proved to be superior to the *Turmzielfernrohr* 5f (TZF – turret sighting telescope) used in the Panzer IV, and this advantage was considered more important than a traversable turret.

The request for a StuGAbt for every division had already been proposed during the creation of the *Sturmartillerie*. By 1942, the priorities had changed, combat against enemy tanks was considered to be more important than the originally proposed infantry support role. Also it must be remembered that production in Germany's heavy industries was stretched to capacity, and this demand could never be realized. The summary continues:

5) The sensitivity of the *Sturmgeschütz* to attack on the flank made it necessary to deploy 2cm FlaK 38 guns. It should be considered to provide two anti-aircraft batteries for every StuGAbt (each with three StuGBttr). The 2cm Flak will be used as a light support weapon, and also it will provide the division with the urgently needed anti-tank protection.

Item 5 highlights one of the main disadvantages of the *Sturmgeschütz* design; the lack of a close-defence weapon which caused assault gun crews to rely on close cooperation with the escorting infantry. These troops specially trained to eliminate enemy anti-tank teams and also locate targets for a StuG commander:

A *Sturmgeschütz* from a LwFeldDiv. The unit used single letters (here the letter 'D') to identify their vehicles using the old-style German 'Fraktur' script. Note the name 'Ruth' stencilled on the pannier and that this Ausf F/8 has an extra 30mm of armour welded on. At right a soldier wears a *Fallschirm-Schützenbluse*, (paratrooper combat blouse) also known as a *Knochensack* (sack of bones). (Historyfacts)



The crew in this photograph of a *Sturmgeschütz* Ausf F/8 confirms that the men of *Luftwaffe Felddivisionen* were not always supplied with *Sonderbekleidung for Panzer* (special tank uniform); two are wearing overalls and two are in standard field uniform. A *Luftwaffe* eagle is clearly visible on the jacket of the seated soldiers. It was common practice for crews to reinforce the thin armour of the side panniers by adding spare track sections, in this case wider *Winterketten* (winter tracks). (von Aufsess)

vision from inside a StuG was dangerously restricted (as in any fully-enclosed armoured vehicle). In reality, many superior officers in the infantry were often unable or just unwilling to assist the commander of a StuG. In 1944, this development was taken into account by adding an integral GrenBeglBttr (escort grenadier batteries), and in some cases PzBeglBttr (escort tank batteries) equipped with the PzKpfw II mounting a 2cm gun.

The summary continues:

6) We herewith suggest the tank destroyer detachment of the [infantry] division be organized as follows:

- a) The *Infanterie-Panzerjäger-Kompanie* in its previous form with 7.5cm PaK 40.
- b) A StuGAbt with three StuGBttr and two FlaKBttr (2cm Sfl), placed under the command of the divisional artillery leader.

7) Ultimately, this solution will result in an amalgamation of the *Panzerjägerwaffe* (tank destroyer army) in the *Sturmartillerie*. It will also lead to a simplification of leadership and organization. The solution will still be known as the *Sturmartillerie*, since it complies with the nature of the weapon, and its deployment.

Again this is not surprising. Towards the end of 1942, the *General der Sturmartillerie* feared that his force would no longer be autonomous. His counterpart Guderian,

who should effectively reorganize the *Schnelle Truppen* (rapid forces) into the *Panzertruppen*, demanded that all armoured formations would come under his control. However, he only achieved parts of his demand.

A further report submitted by AOK 2, dated September 1942, is more interesting as it underlines the increased importance of the *Sturmgeschütz* for anti-tank defence:

The report emphasizes that the enemy suffered heavy tank losses due to our new anti-tank weapons. This fact led to him changing how he deployed his tanks. During an attack, the majority of his tanks will be held back behind his infantry, supporting it similar way to our assault guns but from longer ranges. When we counterattack, his tanks will be quickly dug-in for shelter and establish a most effective, actively led defence.

With this method, the enemy weakens his offensive power on behalf of saving his equipment. He sacrifices his infantry to a considerable extent, and slows down the speed of his advance. On the other hand we cannot effectively follow his tanks as our heavy PaK rely on motorized traction. Thus our counterattacks are impeded to a very high degree. This development makes the replacement of all army and divisional tank destroyer battalions by StuGAbt more important and urgent. As all other after-action reports have shown, *Sturmgeschütz* are the most effective, most mobile and best-protected anti-tank weapon.

After-action reports from a number of PzJgAbt have confirmed the superiority of *Sturmgeschütz* to towed or self-propelled anti-tank guns. In February 1943, PzJgAbt 41 of 6.PzDiv submitted its combat experiences in a report:

PzJgAbt 41

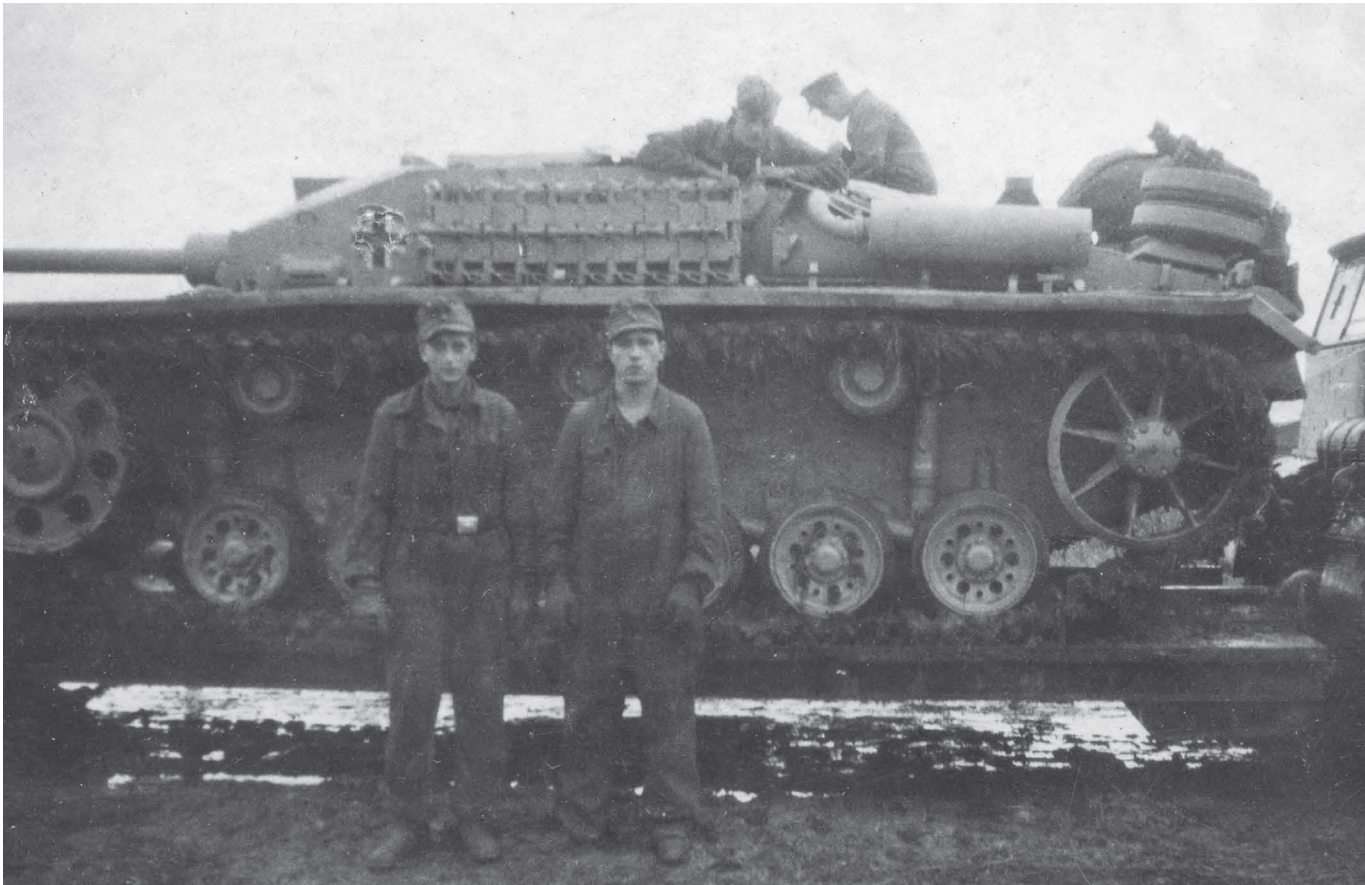
The following experience report is based on the offensive and defensive battles fought by six Panzer divisions in the Don/Donets area over the period of 1 December 1943 to 9 February 1943.

A. General

The combat of [enemy] tanks against [our] tank destroyers was of a special character... Referring to the tactical commitment, the majority of enemy tanks were impervious to the armour-piercing weapons of the PzJgAbt. Unfortunately the greater penetration power of our defensive weapons could not be brought into effect. The Soviet tanks [T-34 and KV-1] have the following advantages:

- a) Strong armour protection
- b) Longer firing range with both AP and HE rounds
- c) Mobile deployment in the artillery role from ranges where our armour-piercing weapons could not be effective.

In particular, our weapons showed the following problems:



A *Sturmgeschütz* Ausf F/8 from a *Luftwaffe* unit loaded on *Sonderanhänger* 116 (SdAnh – special-purpose trailer) for recovery. This Ausf F/8 is fitted with an eight-hole type drive sprocket as used on early PzKpfw III tanks, and also external *Filzbalgfilter* (air filters) mounted on the engine air vents both of which suggest that it is in service with a *Ausbildungs und Ersatzabteilung* (training and replacement unit). (Anderson)

- a) PaK 40 (mot Zug) (motorized platoon)
 High weight
 Poor mobility
 Lack of armour protection
 In general destructive only against advancing enemy tanks, but not against tanks used as under (c)
- b) PaK 40(Sfl) (self-propelled gun)
 Large target easy to see from long range
 Weak armour protection
 Inferior cross-country mobility
- c) Experience with 7.5cm PaK(Sfl)
 This self-propelled gun must be regarded as not ideal, but a sufficiently suitable interim solution.
- e) The comparison of losses and performance figures for a PzJgAbt with a StuGAbt – in combat at the same time and area – shows a measurable improvement:

Panzerjägerabteilung

Number of anti-tank guns: 18
Total losses: 10
Personnel losses: 86
Score: 45 enemy tanks

StuGAbt

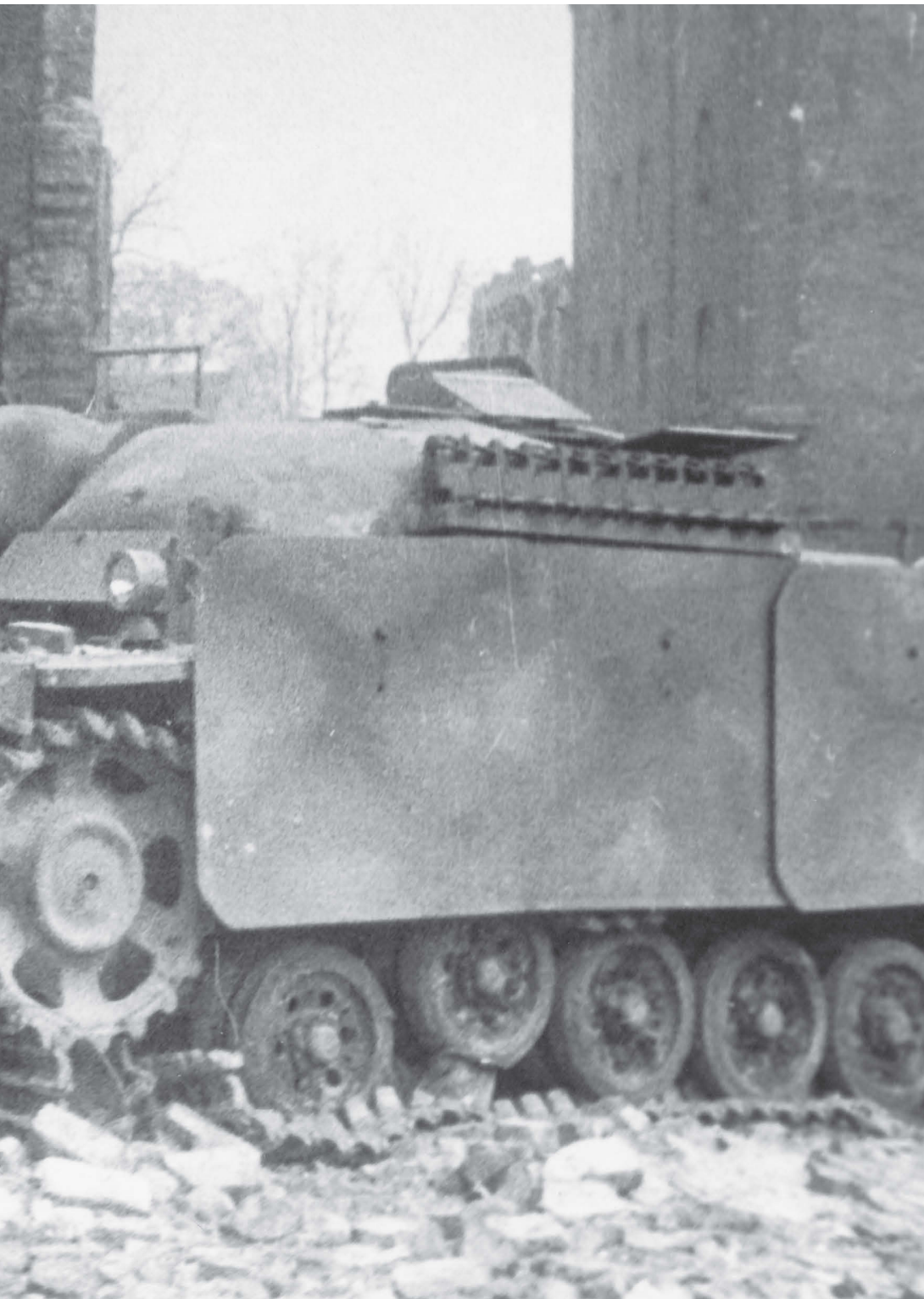
Number of StuG: 21
Total losses: 1
Personnel losses: 19
Score: 114 enemy tanks

The quality of the Russian tanks and how they are tactically deployed requires the creation of superior ways to combat them. Today as always, we need 'Panzerjäger'. The *Sturmgeschütz* is the ideal solution as it ensures maximum results at low effort.

A group of officers of the PzDiv Hermann Göring gather around a *Sturmgeschütz* Ausf F/8. The side panniers and frontal areas have been covered with spare track links to improve protection; standard practice for many crews of early StuGs. The narrow ravine gives a good impression of the difficult combat conditions experienced in southern Italy. (Anderson)







Kolberg 1945: This most unusual *Sturmgeschütz* thought to be from a *Luftwaffe* unit, possibly 12.LwFeldDiv. The vehicle is based on a PzKpfw III hull, but is fitted with *Sturmgeschütz* Ausf G superstructure without the commander's cupola. The vehicle is fitted with *Seitenschürzen* (side skirts) and has a protective cover mounted over the driver's visor. A thick coating of concrete has been applied to the superstructure for added protection. (Netrebenko)



The crew of this *Sturmgeschütz* Ausf F/8 have carefully whitewashed their vehicle; only black *Balkenkreuze* and its thin outline is visible. It has welded-on armour at the front and the crew has placed track links on the front and sides to improve protection. Note the wire mesh cage fitted over the gunner's periscope was used only on this particular production batch. (Anderson)

In late 1942, the first infantry units were issued with *Sturmgeschütz*, but for reasons unknown the newly established *Luftwaffe-Feldeinheiten* (air force field units) were given preferential treatment.

***Luftwaffe* field units**

Generalfeldmarschall Göring had been planning the establishment of *Luftwaffe-Feldeinheiten* (field units) since 1941. In 1942, at a time when the armed forces first experienced a problem in finding sufficient replacements for the many personnel lost during fighting in the Russian winter, Göring managed to receive wide approval for his plan. His argument was eased by the fact that a large number of well-trained troops were available in *Luftwaffe* regiments stationed in France.

Similar to the establishment of SS units, Göring would also put great emphasis on better treatment of his men. Possibly this was the reason his units received *Sturmgeschütz* from when they were formed. Meanwhile, the depleted army infantry divisions had to continue fighting with the equipment they had available, before finally receiving StuGs.

A short entry in the war diary of *Organisationsabteilung* (OrgAbt – organizational department) dated 25 August 1942 confirms a conflict of interest:

The *Luftwaffe* demands that the *Oberkommando der Wehrmacht* changes the previous ratio of *Zugkraftwagen* [ZgKw – tractors] allotted to its benefit. Such a demand does not comply with the actual situation, and was sharply rejected by the OKW.

The ambitious plans initiated by Göring saw the establishment of 20 *Luftwaffe-Feldbrigaden* (infantry brigades) and the first eight units were formed in October 1942. Despite their size, these units were referred to as divisions.

The establishment did not happen without some problems, as noted in the diary of the OrgAbt on 26 October 1942:

The order for the establishment of *Luftwaffe-Feldbrigaden* decisively impairs the current state of material planning. The effect is greatest in the supply of soft-skinned vehicles. Faced with a difficult situation, OrgAbt applied for the number of cross-country vehicles to be reduced by 50 per cent. This request was accepted. Likewise only 33 per cent of the required ZgKw can be supplied and 66 per cent will be substituted by agricultural tractors and trucks.

This comment confirms that Germany's armaments and heavy industries were unable to satisfy the demands of the military. The *Luftwaffe* units were all destined to fight on the Eastern Front where heavy *Zugkraftwagen* were essential, but an agricultural tractor would be useless and not even a poor substitute.

A battle-worn *Sturmgeschütz* from PzDiv Hermann Göring in service with forces sent to defend Sicily in 1943. (Anderson)



**Above:**

A *Sturmgeschütz* from PzDiv Hermann Göring crashes through a shallow stone wall for the benefit of a propaganda photographer. Such action would not be possible if the StuG had been fitted with *Seitenschürzen* (side skirts) as they would have easily ripped off. (Anderson)

Right:

A *Sturmgeschütz* Ausf F/8 from PzDiv Hermann Göring passes some German infantrymen concealed in the shadow of a large cactus plant. The vehicle has been fitted with a shield for the machine gun by the workshop company. (Münch)



A month later the OrgAbt noted:

Despite our determined concerns expressed during the formation of the first ten *Luftwaffe* field divisions, the establishment of a further ten field divisions has been ordered. The requirement for 6,000 soft-skinned vehicles will result in the postponement of re-equipping four to five Panzer divisions.

At the same time as the note was written, some 16 Panzer divisions in the east were in urgent need of being re-equipped.

The first eight *Luftwaffe-Felddivisionen* (LwFeldDiv) were in fact not more than reinforced infantry regiments, formed with four infantry battalions, a PzJgAbt, a *schwere Artillerie-Abteilung* (s ArtAbt – heavy artillery battalion) and support elements. From the very beginning, a *Sturmgeschütz* detachment was an integral element of the s ArtAbt.

On 21 November 1942, Göring as *Reichminister der Luftfahrt* (Secretary of Aviation) and *Oberbefehlshaber der Luftwaffe* (Supreme Commander of the Air Force), ordered the establishment of further *Luftwaffe* field units:

II) 20 LwFeldDiv will each be issued with:

- a) A *leichte Artillerie-Abteilung* [light artillery battalion] with three batteries each with four 7.5cm *Feldkanone* 243(h) or three batteries each with four 7.65cm *Feldkanone*(t)
- b) A *schwere Artillerie-Abteilung* [heavy artillery battalion] with
- c) Two batteries each with four horse-drawn 15cm *Feldhaubitze* 414(f), and one StuG battery with four *Sturmgeschütz*.
- d) One *FlaK-Abteilung* [anti-aircraft battalion].

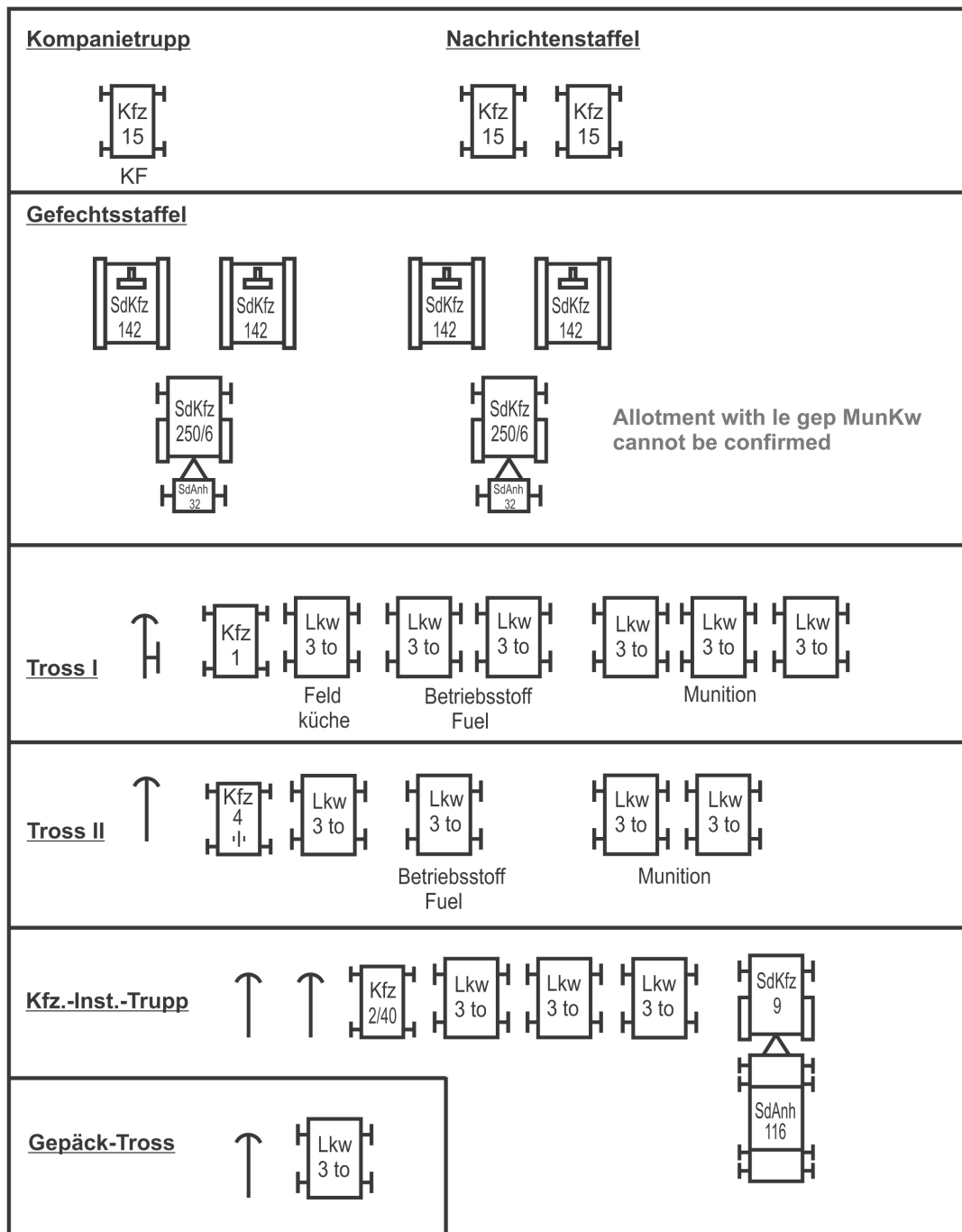
Once again the parlous state of Germany's industry revealed. Even the artillery battalions of the Göring 'elite' units had to rely on captured light and heavy artillery pieces of either Dutch (h), Czechoslovak (t) or French (f) origin. Even by the end of 1942, the heavy artillery battalion was horse drawn. However, one should remember that the actual organization of the *Luftwaffe* field units was dependent on what equipment was available which resulted in many variations.

The small StuG detachment was initially attached to the heavy artillery battalion, but later assault guns were also issued to the tank destroyer detachments; proof of a change in priorities. These *Luftwaffe* StuG batteries were authorized to have only four assault guns each, possibly this was due to the delivery situation. Despite of this reduced allotment, workshop and supply elements were identically equipped as that for an independent StuGBtr equipped with six or ten *Sturmgeschütz*, similar to that noted in KStN 446a. The *Organisationsabteilung* would repeatedly regret this oversupply.

One of the few available documents describing the commitment of *Luftwaffe* field divisions was submitted by AOK 18 on 2 April 1943. The reason for this

Sturmgeschütz Battery for *Luftwaffe Feld-Divisionen*

Table of organization with four *Sturmgeschütz*, KStN unknown.





report is unknown as it was compiled by a *Sonderbeauftragter für Panzerabwehr* (special envoy for anti-tank defences). However, details taken from it allow an interesting view on the efficiency of German weapons, and possibly the basic tactics employed.

18.Army was part of the force surrounding the city of Leningrad in the northern sector of the Eastern Front. Among the forces having tanks or *Sturmgeschütz* were s PzAbt 502, StuGAbt 226, and 1, 10, 12 and 13.LwFeldDiv.

Three combat missions were evaluated:

- 1) 12 January to 5 February 1943, south of Lake Ladoga near Ssinajavino
- 2) 12 February to 17 February 1943, near Nishkino
- 3) 19 March to 31 March 1943, south of Krassnyj Bor (still not captured)

During these commitments, s PzAbt 502 had a maximum of six PzKpfw VI Tigers and 15 PzKpfw III tanks combat ready. StuGAbt 226 had 41 *Sturmgeschütz*, including recently allocated vehicles. The four LwFeldDiv had 20 StuG in total, again including recently allocated vehicles.

In terms of anti-tank defences; the remaining field units were equipped with 253 medium PaK (5cm PaK 38) and 383 heavy PaK (7.5cm PaK 97/38, 7.62cm PaK (r) and 7.5cm PaK 40) the heavy being towed and self-propelled (SP).

The results are interesting:

A rare view into the loader's hatch of a *Sturmgeschütz* Ausf G from PzDiv Hermann Göring; the empty bracket was for a *Maschinenpistole* (MP) 40 machine gun. Note the thin armour plate used for the roof of the fighting compartment; this could be penetrated by a hit from infantry mortar shell. (Anderson)

Initially StuG units were issued with SdKfz 252 armoured ammunition carriers. When production of this highly-specialized vehicle ended 1941, a simpler variant was built on the chassis of the SdKfz 250 light armoured halftrack. The SdKfz 250/6 (Ausf A) carried 70 rounds of 7.5cm StuK L/24 ammunition had the Ausf B variant carried 60 rounds 7.5cm StuK 40 L/48 (Ausf B) ammunition. The *Sonderanhänger* (SdAnh) 32 trailers were originally design to carry the much shorter L/24 round, but it was modified to carry 56 L/48 rounds. (Anderson)

	s PzAbt 502	StuGAbt 226	<i>Luftwaffe</i> <i>Sturmgeschütz</i>	Towed and SP anti-tank guns (other units)
Enemy tanks destroyed	160	210	17	482
Personnel losses	49	87	32	?
Own losses (total)	9 Tiger 13 PzKpfw III	13	5	?

The *Luftwaffe* infantry units (presumably) used their small *Sturmgeschütz* detachments for long-range tank defence and local counterattacks. On 14 April 1943, 13 *Luftwaffe* field divisions were in combat, and those fighting with 18.Army reported their availability:

	1.LwFeldDiv	10.LwFeldDiv	12.LwFeldDiv	13.LwFeldDiv
Combat ready	4	2	4	—
In need of repair	—	1	—	1
In supply	—	1	—	3





The *Sturmartillerie* unit, StuGAbt 226, reported on 14 April 1943 that it had 13 *Sturmgeschütz* combat ready and a further 15 awaiting repair. At that time the battalion had implemented KStN 446a, which authorized 10 StuG in a battery, giving a total of 31 in a battalion, including a StuG for the commander..

If the unit could keep its batteries operational, then StuGAbt 226 would be a formidable combat force which could be deployed for attack missions in close support of the infantry or establish a strong tank defence.

On 25 September 1943, long after the failed offensive at Kursk, the number of StuG in LwFeldDiv detachments would not exceed four.

At the end of 1943 it was decided that all surviving LwFeldDiv were to be transferred to the army, but they would retain their original organization. This was accepted and 14 weakened *Luftwaffe* units passed to the army.

At this time of organizational chaos most LwFeldDiv relinquished their *Sturmgeschütz* batteries; their surplus equipment was used to establish new Heerestruppe StuGAbt, or passed to other units as replacements.

A thoroughly camouflaged *Sturmgeschütz* parked in the main street of a town in Italy while being re-armed from an SdKfz 250/6 *Munitionswagen* (ammunition carrier). Note the bag filled with *Stielhandgranate* (stick grenades) on the rear of the vehicle. (Anderson)

Hermann Göring Units

Hermann Göring promoted the establishment of *Luftwaffe* field units early. By 1935, police units served as a cadre for what was to become the Regiment Hermann Göring.

The regiment served during the annexation of Austria and Czechoslovakia. During the invasion of Poland, most forces remained in Germany to guard Göring and his entourage. Later Regiment Hermann Göring participated in the Western campaign. During the initial phase of the invasion of the Soviet Union it served in close cooperation with 11.PzDiv.

By mid-1942 the unit was expanded to a brigade. During this process, it was decided to further enlarge it to a division. In September 1942, orders were given to establish the Division Hermann Göring with Panzer and *Sturmgeschütz* to the same extent as the *Panzerdivisions* in the West.

At roughly the same time OrgAbt announced it would establish *StuG-Abteilungen* for 6., 7. and 10.PzDiv using the material of StuGAbt 209. Here usage of the term *Abteilung* is misleading, as the units intended for the PzDiv were to have the size of a company battery, with a maximum of 11 assault guns, and should be part of the PzJgAbt. However, these plans were not continued in 1942. Instead, Hermann Göring (HG) division should receive two *Panzer-Abteilungen*, and an entire StuGAbt in its artillery regiment.

When, by the end of 1942, the situation in North Africa came to a crisis, parts of the Division Hermann Göring were sent to Tunisia. By May 1943, the unit had capitulated to the Allied forces.

A *Sturmgeschütz* had racks installed to carry 54 rounds of 7.5cm GrPatr ammunition. However, StuG crews were known to increase the 'official' amount by removing the racks. Often they packed up to 90 rounds into the interior, with the crew virtually sitting on shells. (Anderson)

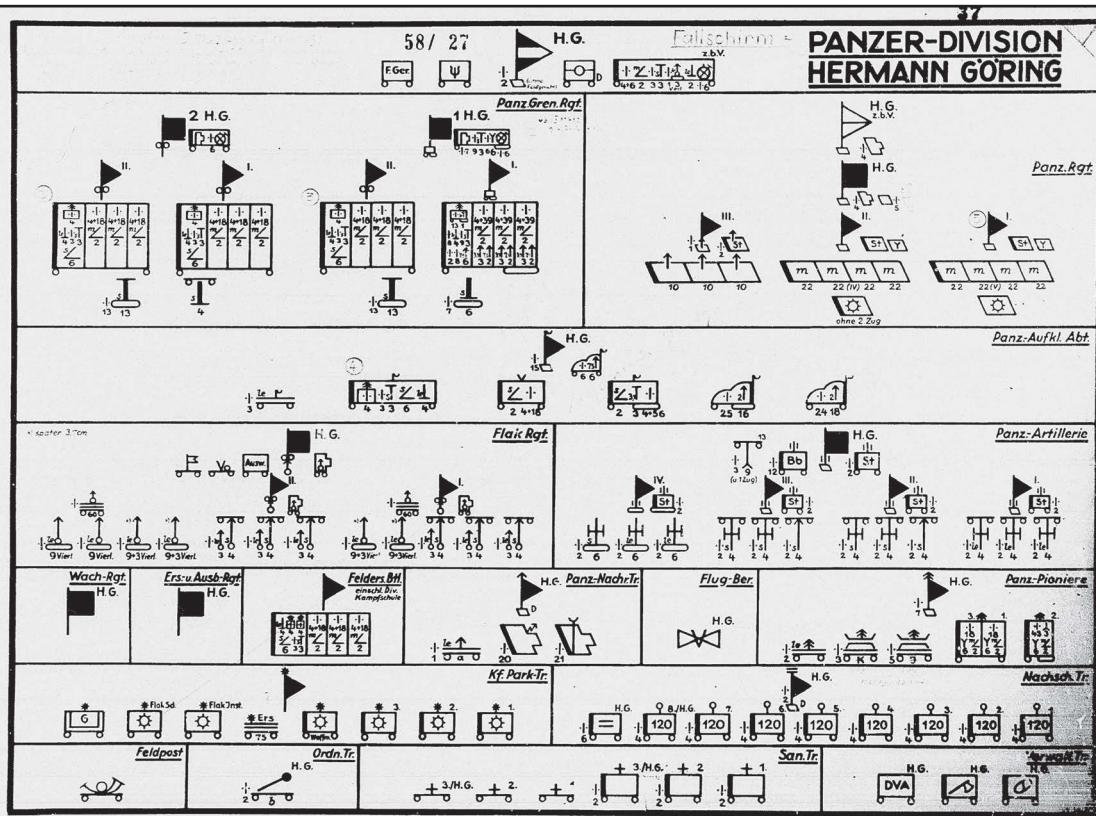


The remaining remnants were now ordered for re-establishment as a *Panzerdivision*, now forming the PzDiv Hermann Göring (HG). By June it was transferred to Sicily to defend the island against the anticipated landing.

Compared with the older division, PzDiv HG showed a much stronger material equipment. The *Panzerregiment* now consisted of two *Panzer-Abteilungen* with four *mittlere Kompanien* each, summing up to 176 tanks. The *Sturmgeschütz-Abteilung* "HG" was now part of the PzRgt, as its III. *Abteilung*. This accoutrement complied with the early new 43.PzDiv organizational standard (with PzRgt 43). This standard was not adopted for other units – PzDiv "HG" was much stronger than any other Panzerdivision, which were organized according the normal 43.PzDiv standard, lacking the *StuG-Abteilung*.

PzDiv HG's III.*Abteilung* (10., 11., 12. Batterie of PzRgt HG) was organized according the KStN 446a dated 1 November 1942. Each battery had ten *Sturmgeschütz*, of which three were *Sturmhaubitzen*.

The commitment of *Sturmgeschütz* in the southern theatre of war (Sicily and Italy) was not without problems. The 11. (StuG)/PzRgt HG submitted an after-action report by October 1943 when in defensive positions near Caivano and Cardito near Naples::



Report about the loss of a *Sturmhaubitze* 42 of 11. *Batterie*

After strong enemy infantry and tank forces broke through our positions near Cardito at 16:00hrs, I met the leader of the PzAufklAbt [reconnaissance battalion], *Hauptmann* Lübke. He gave the order to launch a counterattack with my available *Sturmgeschütz*. I manned two assault guns, whose crew had been relieved after being wounded, with the crew of a *Sturmhaubitze* whose vehicle had a jammed gun breach. I decided to lead the counterattack with my own and the other two *Sturmgeschütz*, and called for infantry support. Lübke told me to grab any man I could find. With 30 men I started the attack by slowly moving forward, with both sides guarded. We moved into positions at the southern boundary of Caivano. The enemy opened a heavy mortar bombardment. After 10mins, Lübke ordered a withdrawal to centre of the village. I retreated for some 200m. A short time later, Lübke joined us and ordered us to proceed with the counterattack. Approaching an S-shaped bend in the road at the southern edge of Caivano, our view ahead was completely blocked by a high stone wall. I informed Lübke that any further advance was impossible, since our line of fire was totally obstructed. I stopped 10m before the second curve and ordered the

This *Sturmgeschütz* Ausf G has been built using the hull of a PzKpfw III; one of a number of expedients employed to keep a constant supply of this valuable battlefield asset. The original 50mm hull armour has been reinforced by welding on extra 30mm armour plate. (Anderson)





infantry forward to scout the road. They reported that several Sherman tanks were stationary on the road. Lübke gave orders to immediately cross a field in a right-hand direction and open fire on the enemy tanks. I argued that this position was very unfavourable. Lübke replied, "Move up, there is no alternative, it's either you or the Shermans." I drove to the ordered position, but due to the muddy ground my vehicle moved very slowly. It took some 5mins to move into position. Although their engines of the enemy tanks were not running, their guns tracked our advance exactly and aimed at us. Despite this I fired my first round. A second later, I received the first hit and our engine stalled. I tried to fire a smoke candle, but received a second hit which struck the left slope above the driver's visor. The impact lifted off the roof plate over my gunner and hit and damaged the cupola, then slowly fell into the fighting compartment and struck my hand. I instantly ordered the crew to abandon leave the *Sturmgeschütz*, but I was catapulted out by



the shockwave of a third hit. When I regained consciousness, some 40m from my vehicle, I became aware of two infantrymen dressing my wounds. A short time later a second *Sturmgeschütz* moved up, but also received a direct hit. As I was still able to move, I climbed onto the assault gun and returned.

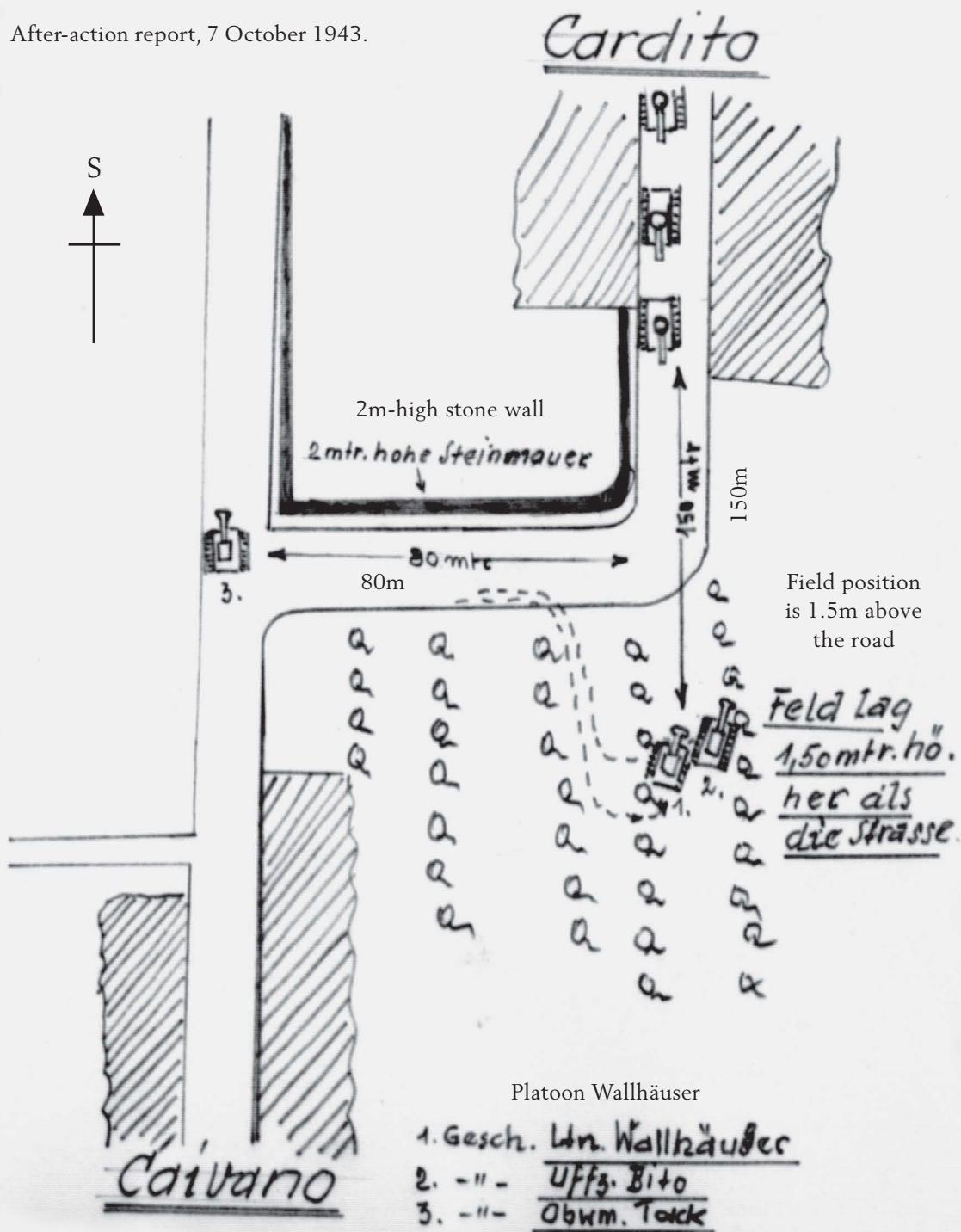
The after action report sent by the *Batterieführer* was instantly commented on by the StuGAbt commander:

To *Panzerdivision* Hermann Göring

Attached to this letter is an after action report of 11.(StuG)7.PzRgt HG describing the total loss of a *Sturmhaubitze*, the temporary failure of a further *Sturmgeschütz* and the considerable loss of life.

A *Sturmgeschütz* Ausf F/8 from PzDiv Hermann Göring has its tactical number '34' stencilled on the gun's armoured sleeve and has been retrofitted with a machine-gun shield. The Ausf F/8 is followed by a *Sturmhaubitze* (assault howitzer) armed with a 10.5cm light field howitzer; proof that they were also issued to units other than *Sturmartillerie* (assault artillery) . (Anderson)

After-action report, 7 October 1943.



All losses were caused by the absolutely wrong commitment of the *Sturmgeschütz*, ordered by *Hauptmann* Lübke.

It is absolutely impossible to commit *Sturmgeschütze* in such a combat situations – especially in darkness – without determined infantry support. A StuG cannot defend itself at night. At 16.45hrs, the order was given to move into an absolutely inappropriate position to combat the enemy tanks. The leader of 11.Btr rejected the order due to the onset of darkness, but this was overruled and he continued the deployment.

The battalion considers that by ignoring the legitimate objections of a battery leader, we regard the actions of this officer, who lacked experience and any knowledge of the tactical commitment of *Sturmgeschütz*, as intolerable. With his exclamation “you or the Shermans”, the loss of men and equipment was recklessly accepted. If the *Sturmgeschütz* had been deployed correctly, we could have inflicted serious damage on the enemy without any loss of personnel.

The *Abteilung* hereby issues a reprimand *Hauptmann* Lübke for his poor judgement.

The low silhouette of the *Sturmgeschütz* made it simple to conceal by using camouflage, perfect for an ambush missions. However, high walls and tall hedgerows were a constant obstacle in Italy, and in dense scrub close cooperation with the infantry was indispensable. (Anderson)





A *Sturmgeschütz* Ausf. F/8 from 11. LwFeldDiv moves up on a dusty road during the assault on Greece in May 1943. The vehicle appears to have been delivered in tropical camouflage, certainly suitable for the conditions. For better ventilation, the large maintenance hatch over the gunner has been opened, and the wire mesh protective cover for the periscope is visible. Note the tactical marking 'A' stencilled on the gun mantlet. (Anderson)

This short report again proves that in the difficult Italian terrain tanks, and especially *Sturmgeschütz* were certainly not the best possible tools. Their commitment was severely limited by their design and their poor observation means. Steep ascents and descents overrated the performance of engines, brakes and the steering mechanism, leading to many technical losses. Especially in built up areas with narrow roads, walls and debris, the turretless *Sturmgeschütz* were dangerously handicapped. This problem, however, was known after Stalingrad at the latest. Here infantry would have to do the dirty job.

The reaction of the *Abteilung's* leader to protect his subordinate is comradely, but hardly expedient. A better understanding, target-oriented training of the different subunits and subsequently improved cooperation is one of the pillars of success of any armed conflict.

From an after-action report of 11. (StuG)Kp/PzRgt Hermann Göring:

7 October 1943

The battery was attached to *Abteilung* Rossmann and deployed near Cardito. Two StuG commanded by *Wachtmeister* (Wm) Boerner were positioned as a forward observation post at the junction of Cardito-Afragola-Casavia road. The platoon of *Stabswachtmeister* (StWm) Schulze-Oswald was positioned with two StuG at

the southern entrance to Cardito. Platoon Wallhäuser, with two StuG, secured the area 2km southeast of Cardito. At 17:45hrs it was reported that enemy tanks were advancing from Afragola. At around 18:00hrs, *Oberleutnant* Jekosch and *Leutnant* Roebig took a Beikrad (Beiwagenkrad – motorcycle with sidecar) to get in contact with the Platoon Boerner, which had become trapped. In the following action, *Leutnant* Boerner was fatally shot in the head; Jekosch and the driver were wounded. This alarmed the commander of Platoon Boerner who then decided to forcibly break-out to Cardito. During the fight two Sherman tanks were destroyed. Schulze-Oswald, in the following the StuG, destroyed the Sherman tank which had fired on the battery commander's Beikrad. After Jekosch had been wounded, Schulze-Oswald assumed command of the assault guns positioned at the southern exit of Cardito.

From 19:00 to 23:30hrs we heard the distinctive sound of tank tracks, and estimated that 25 to 30 enemy tanks were advancing.

The two reconnaissance patrols sent out by Schulze-Oswald and Lübke failed to find the enemy. Two further patrols led by Schulze-Oswald also failed. Possibly the patrols did not advance far enough.

Success: Three enemy tanks (Sherman) destroyed. Two trucks with mounted infantry destroyed, and the following infantry was repulsed by machine-gun fire. Losses: *Leutnant* Roebig; dead: *Oberleutnant* Jekosch and *Gefrierter* Rabitsch; wounded. No material losses.

The same Ausf F/8 carrying a group of infantry during a field exercise. The vehicle is fitted with two 2m rod aerials, indicating that *Sturmgeschütz* 'A' was possibly a command vehicle. (Anderson)





This *Sturmgeschütz* Ausf G photographed during a field exercise carrying a *Schiedsrichter* (arbitrator), identifiable by the white band around his *Schiffchen* (forage cap). (Anderson)

(Note: The ranks *Wachtmeister* and *Stabswachtmeister* were by tradition only used by the artillery and cavalry, therefore also by the *Sturmartillerie*. Division Hermann Göring, as part of the *Luftwaffe* would normally use the same rank designations as the army. This remains a mystery.)

The 7.5cm StuK 40 main gun in the *Sturmgeschütz* proved to be superior to the 75mm Gun M1 used in early versions of the Sherman tank. However, combat tactics were much more important than just firepower and armour. An attacking tank was always at a disadvantage, especially when advancing against well-camouflaged enemy armour.

In December 1943, PzDiv Hermann Göring was in defensive positions to the north of Naples, before slowly retreating as superior Allied forces continued to advance.

An after-action report from 9.(Bttr) PzRgt Hermann Göring:

1 November 1943

Enemy has advanced in unknown strength and is attacking Height 670, some 2.5km east of Presenzano. Our reconnaissance squads were taken by surprise by the assaults. *Oberleutnant* Schröder is in the area with his *Stabskompanie*.



Oberleutnant Bellinger has launched a counterattack into the flanks of the Americans with *Chefgeschütz* (commander's StuG), he has one infantry man as a dispatch rider. No combat possible from the road, so the StuG retreated to the cover of a hillside. Opened fire with a hollow-charge round and destroyed an enemy anti-tank rifle [Bazooka] position.

Successes: Enemy almost annihilated. Some areas of the hillside caught fire. One enemy officer and 12 troopers taken as prisoner, also two US anti-tank rifles [Bazooka] with ammunition, a machine gun with mounting, several rifles and other material were captured. Due to the burning scrub, other material and a number of seriously injured enemy soldiers could not be recovered.

2 November 1943

Late in the afternoon the enemy had attacked from the southeast, hitting the right flank of the staff company. The tank destroyer platoon was taken by surprise and had to abandon two guns plus tractors. Two *Sturmgeschütz* were moved into positions on the road and prevented the enemy from advancing with well-directed fire. Despite this, our front-line positions had to be re-taken. To recover the abandoned anti-tank guns, an advance commenced at 20:00hrs, supported

The marking for *Sturmgeschütz*, a unit badge and a single identifier letter have been stencilled on the glacis plate, but the identity of the unit is unknown. The letter 'A' possibly indicates that it is from a small unit with only four to ten StuG; perhaps it is from a *Luftwaffe* field unit. (Anderson)

by the grenadiers, and one gun was recovered. A short time later a second attack, led by Bellinger, was launched. Under supporting fire from the *Sturmgeschütz*, the second anti-tank gun and tractor was recovered undamaged.

3 November 1943

In the early afternoon, the enemy tried to infiltrate our lines to the left the Rome-Naples road, which ran along the foot of the mountains. These assaults were repelled by two *Sturmgeschütz* led by Bellinger by making use of the gun and the machine gun. The enemy was forced to retreat after suffering heavy losses. Later in the afternoon, the enemy launched three further attacks but all were repulsed.

The assault gun crews of PzRgt Hermann Göring had shown, despite the terrain in Italy, their ability to successfully combat a superior enemy attacking with large numbers of well-equipped infantry. The clear advantage of a mobile anti-tank defence over a towed anti-tank gun is evidenced by the fact that the Germans had to abandon two guns. However, the situation favoured German forces as the attacking US force was not supported by tanks and also little or no air cover was provided by Allied air forces.

A *Sturmgeschütz* Ausf G, photographed with 8.8cm-armed Nashorn tank destroyers, during the winter of 1943/44 on the Eastern Front. The vehicle carries the number 'III', in Roman-style numerals, on the rear of the hull and also the commander's cupola. The vehicle is fitted with *Sternantenne* (star antenna) indicating that it is a command vehicle. (Anderson)





A *Sturmgeschütz* from PzJgAbt 1011 (L) (11.LwFeldDiv) during the occupation of Greece; The 80mm frontal armour could resist fire from most enemy tank and anti-tank guns until 1944. However, it remained vulnerable to attack from the side and rear until the end of the war. (Anderson)



1943 – in the *Panzertruppe* 3

Due to the lack of resources and limited production capacity in Germany, there were not enough assault guns available to be issued in battalion strength to each infantry division as was initially planned. Instead, all *Sturmgeschütz-Abteilungen* (StuGAbt) were integrated at *Heerestruppen* (army troop) level, from where they were requested by infantry and tank units to assist at points of main effort. Thus the new weapon became the responsibility of and was controlled by the *General der Artillerie*.

However, there were many exceptions. With the establishment and expansion of the armed forces, the Waffen-SS units would have preference when *Sturmgeschütz* (if in small numbers) were issued. Other permanent subunits integrated for infantry support also received *Sturmgeschütz* in relative small numbers.

As Operation Barbarossa progressed an urgent requirement arose for an effective weapon to combat and defeat superior Soviet armour: the *Sturmgeschütz* would quickly prove to be absolutely suitable for this task.

Motivated by this development, the *Organisationsabteilung* (OrgAbt), seconded to the *Oberkommando des Heeres* (OKH – High Command of the Army), again considered issuing *Sturmgeschütz* as a permanent subunit to various field units, more precisely the infantry divisions. However, despite of the high-flown plans of 1938 to 1940, *Sturmgeschütz* were now to be issued in company, rather than battalion strength.

Again the army was treated as a subordinate service. Hermann Göring, the chief of the *Luftwaffe* demanded that his *Luftwaffe-Felddivisionen* were to be the first to receive issues. But again, the number was small.

A new chapter in the history of the *Sturmgeschütz* service would be opened in 1943.

In October 1943 the 3.PzGrenDiv was reformed according to PzGrenDiv 43 standard, when it was planned to provide the unit with a PzStuGAbt equipped with 42 *Sturmgeschütz*. However, these were in short supply forcing the unit to use Italian-built *Semovente* (self-propelled) guns. Their situation changed in 1944 when they were supplied with a full complement of StuG. (Anderson)



**Left:**

Painted in a three-tone camouflage scheme, newly delivered *Sturmgeschütz* of III. Abt/ PzRgt 2 (16. PzDiv) parked in a yard at their garrison before shipping-out to the Eastern Front. Note the *Seitenschürzen* (side skirts) are non-standard, the last plate appears to be another middle section. (Wilhelm)

Left below:

A *Sturmgeschütz* of III. Abt/ PzRgt 2: The crew has attached lengths of track to the side of the hull as extra protection for this vulnerable area. A large wooden crate, fabricated in the field, is mounted on the rear of the engine deck. (Wilhelm)

Stalingrad

German armies won a last series of battles in 1942. In North Africa, El Alamein was reached, and in southern Russia the Caucasus and Stalingrad.

However, the Allies continued to increase pressure on the German war machine. Although a failure, the amphibious assault by British-Canadian forces at Dieppe awakened the German military to the prospect of a second front in Europe.

While the situation at Leningrad in the north and also Moscow was relatively quiet, Hitler ordered his forces to advance south. His aim was to seize Stalingrad, the city bearing the name of his enemy, and understandably he wanted the oil; a strategic necessity. But he carelessly ignored the vastness of Russia. The initially successful offensive was split in two wedges; while the 6. Army advanced along the northern flank to finally reach Stalingrad, the southern forces spread out to take the Black Sea coast and finally advance to the Caucasus Mountains. If there were any critics, the speed of the advances silenced them. Hitler was so confident of achieving his targets that he would not listen to the Chief of Staff of the Army (Halder until September 1942, then Zeitzler). But was Hitler right; was he the military genius he truly believed he was?

History would show that by November 1942 German troops trying to take Stalingrad were overstretched and battle weary. A continuation of the



Three *Sturmgeschütz* of III.Abt/PzRgt 24 (24.PzDiv) during a short halt. The second StuG has lost the complete right-hand side set of *Seitenschürzen* (side skirts) making the vehicle vulnerable to attack by Soviet infantry armed with anti-tank rifles. (Münch)

attack on Stalingrad was fraught with danger, since neither replacement equipment nor fresh personnel could be sent. Nevertheless, 6.Army did succeed and occupied the most of the city. Despite being weakened and also battle weary, Soviet commanders combined all their offensive formations power and launched *Operatsiya Uran* (Operation Uranus). After some five days the Red Army had surrounded and trapped significant parts of 6.Army.

On 31 January 1943, *Feldmarschall* Friedrich von Paulus was forced to surrender. The capitulation at Stalingrad had a disastrous effect on the German armed forces, despite all the fanatical propaganda spouted by Goebbels. A complete army, three Panzer divisions and 12 infantry divisions were lost.

The landing by US forces in North Africa on 7 November 1942 also came at a crucial moment. Rommel's forces had all but exhausted their supplies and were under attack on two fronts, which forced *Panzerarmee Afrika* back to Tunisia where it held out until 12 May 1943.

***Sturmgeschütz* in Panzer Divisions**

In October 1942, the OrgAbt suggested forming *Sturmgeschütz-Abteilungen* for 6, 7 and 10.PzDiv, using the men and equipment of StuGAbt 209. The term '*Abteilung*', which normally described a battalion size unit, should be understood as a battery or company in the case of the above Panzer divisions. The reason for this decision remains unclear, and to the knowledge of the author was never realized.

The loss of 6.Army would change everything. In March/April 1943, the order was given to re-establish those divisions destroyed at Stalingrad. By 1 January 1943, temporary tables of organization had already been published which indicated as to how the 'new' 6.Army would be formed. These provisional plans provided for three rifle battalions and a *Panzerjäger-Kompanie* (PzJgKp) with nine self-propelled anti-tank guns for each infantry division, and one Panzer grenadier battalion and a PzJgKp with 12 self-propelled anti-tank guns for each tank division. As an option, the PzJgKp could be substituted by a *Sturmgeschütz-Batterie* (StuGBtr). Thus these documents prove, for the first-time, the integration of a StuGBtr in both infantry and Panzer divisions on a regular basis.

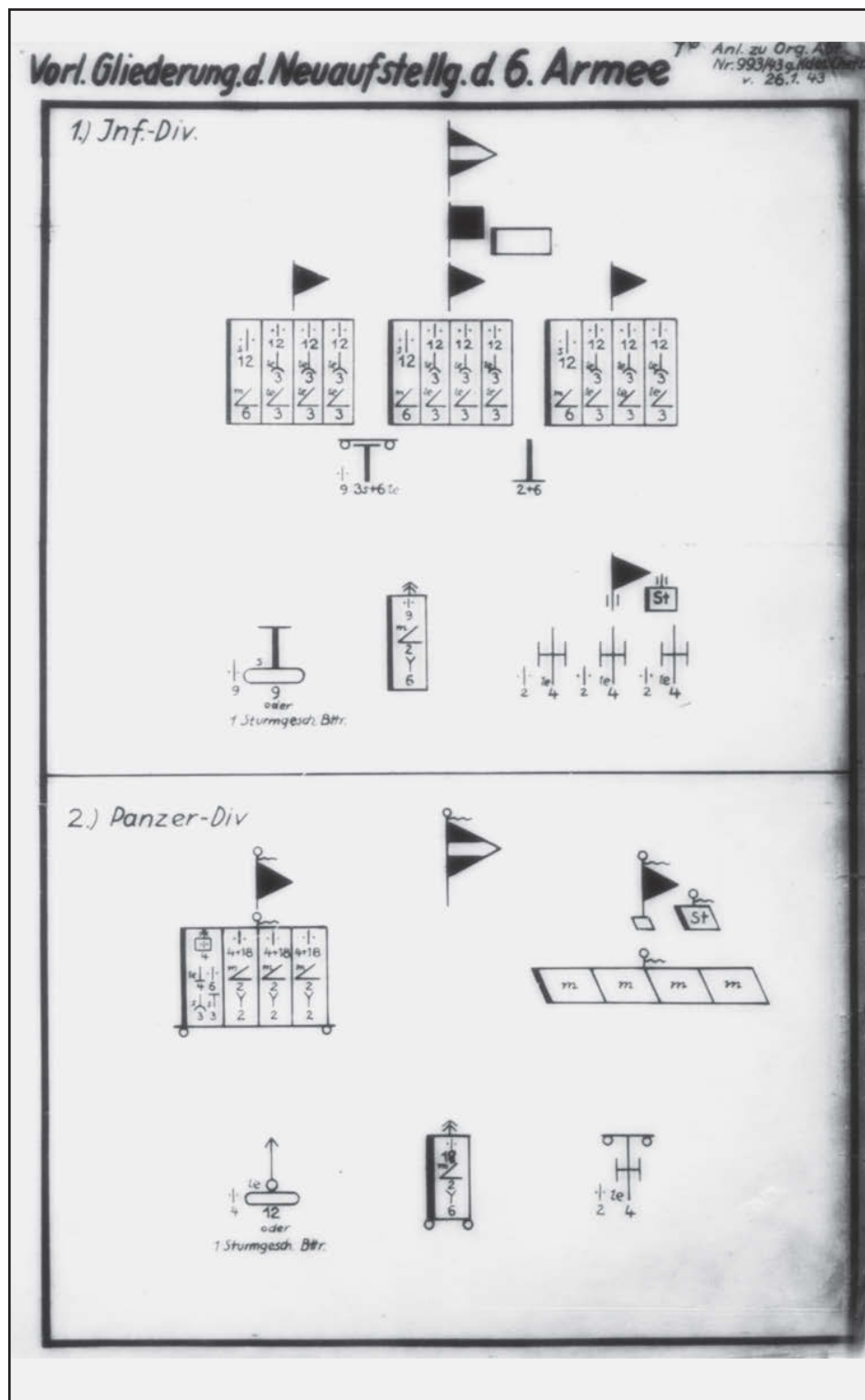
When compared to a fully-equipped 1942-style infantry/tank division the overall allotment appears weak. To the author's knowledge, these suggestions were also never instigated. However, it was standard practice to merge battle-worn units as *Kampfgruppen* (battle groups). In order to restore their combat value, subunits were also reinforced by sparingly allotted equipment. The table may have served as an organizational help.

Around March/April 1943, the *Generalinspekteur der Panzertruppe* decreed that the three tank divisions (14, 16 and 24.PzDiv) lost at Stalingrad

This *Sturmgeschütz* armed with the 7.5cm StuK 40 L/48 is from III.Abt/PzRgt 24. The vehicle carries the tactical number 1134, stencilled in plain black, which identifies it as being from 11th *Schwadron* (squadron) in the division. The style in which the Zimmerit coating has been applied indicates that the StuG was manufactured by Alkett. (Anderson)



This preliminary table for the re-establishment of PzDiv and InfDiv destroyed in Stalingrad was published in early 1943. Upon availability, *Sturmgeschütz* were to be issued as a (better) alternative to towed anti-tank guns.





were to be re-established. Beside the standard I.Abt and II.Abt, all the divisions were authorized to form a III.Abt (*Sturmgeschütz*). Guderian, who had vehemently opposed the large-scale introduction of *Sturmgeschütz* from the beginning, had finally to accept out of sheer necessity. In 1943, German tank production was barely able to replace the heavy and continuous tank losses and at the same time satisfy the requirements for the establishment of new units. Only the manufacturers of the *Sturmgeschütz* would prove to be capable of significantly increasing production.

Organization of *Panzer-Sturmgeschütz-Abteilungen*

At around this time, a new organizational structure for the *Panzertruppe* was published, the '*Panzerdivision mit PzRgt 43*', which served as a pattern for the three Panzer divisions. This proposed structure recommended a significant combat strength, intending to issue 96 PzKpfw V Panther tanks to the I.Abt, and 96 PzKpfw IV to the II.Abt and also 96 *Sturmgeschütz* to the III.Abt. However, since production of the new PzKpfw V Panther tank was beset by many problems, it was to be temporarily replaced by the PzKpfw IV until sufficient numbers became available.

The order to establish three *Panzer-Sturmgeschütz-Abteilungen* was given in March 1943 by the *Oberkommando der Wehrmacht* (OKW). The new-style units were to be issued in the following order:

The commander (wearing a forage cap) and the loader (a field cap) of an unidentified *Sturmgeschütz* unit (possibly Waffen-SS). Both are wearing throat-type microphones and headphones, connected to the intercom system. The gunner's periscope is visible, and as is the *Scherenfernrohr* (scissors-type periscope) in front of the commander. (Hoppe)

Geheim

Panzer-Division

mit Pz.-Rgt. 1943

Dir. Stab

Brig. Stab

Zur Schwerpunktbildung tritt gegebenenfalls eine Heeres-Tigerabteilung hinzu

Panz. Rgt. 1943

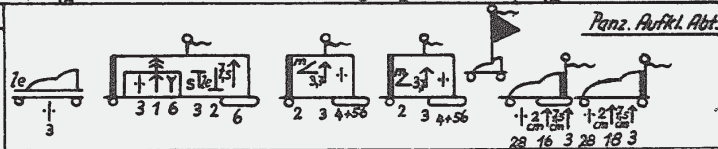
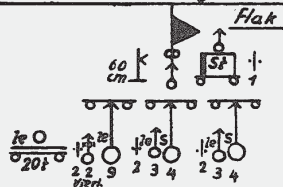
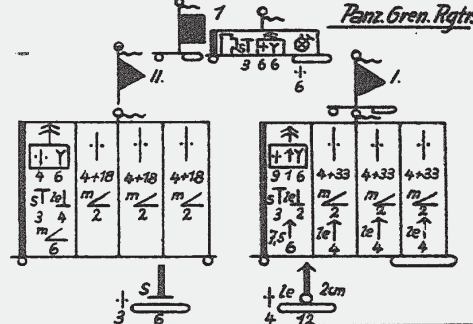
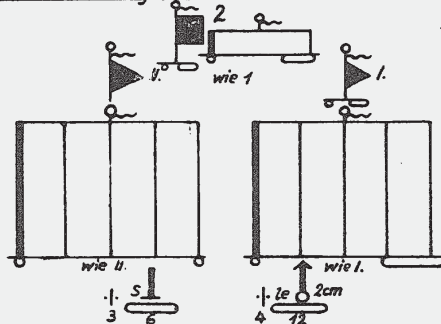
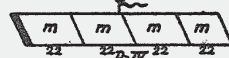
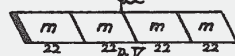
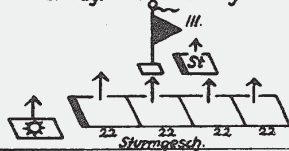
Panz. Rgt.

Pz.-Jäg.-Abt. mit Sturmgesch.

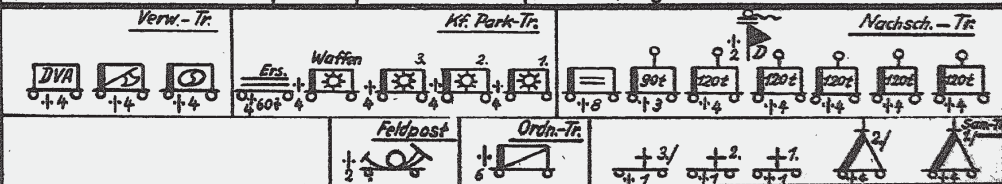
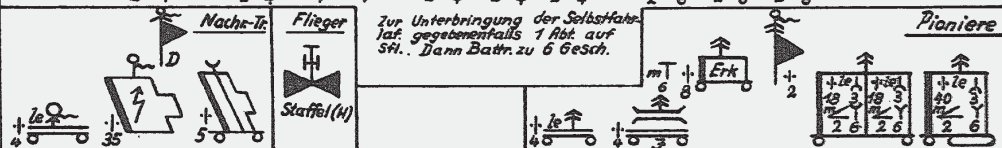
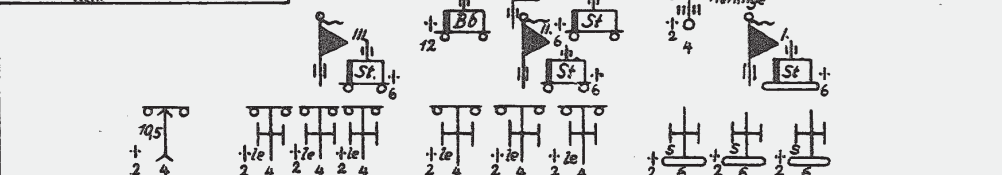
Aufkl.-Zg.
2-3 Fernlenk.-Zge.
Flamm-Zg.

bis Pz. V vorhanden

Pz. Tr



Artillerie





III.Abt/PzRgt 2 for 16.PzDiv until 30 April 1943
 III.Abt/PzRgt 24 for 24.PzDiv until 15 April 1943
 III.Abt/PzRgt 36 for 14.PzDiv until 30 April 1943

At the time respective new KStNs were not available, so the *Panzer-Kompanien* (*Sturmgeschütz*) were organized according to the available *Panzertruppen* structures:

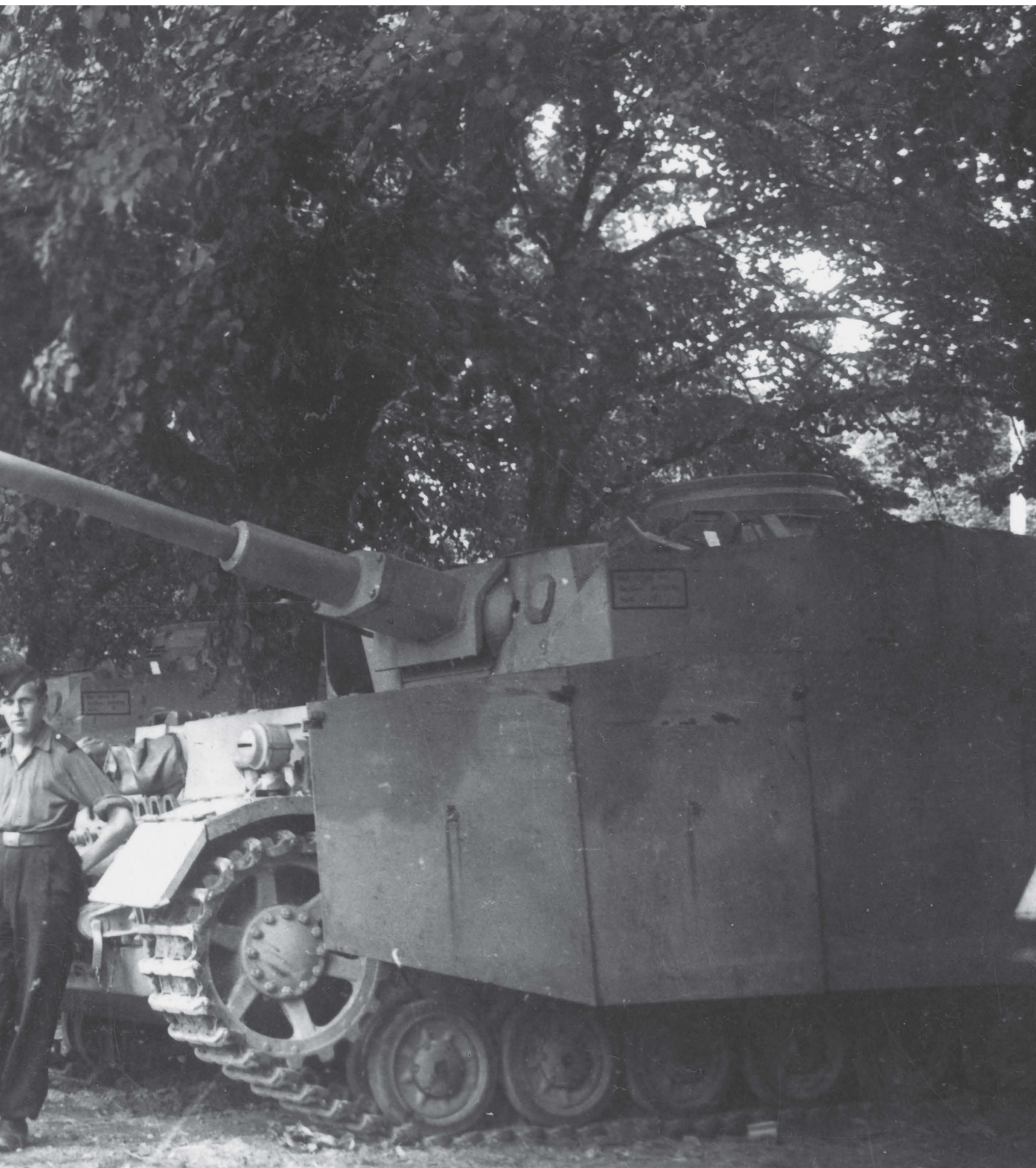
Abteilungsstab (battalion staff) according KStN 1107 dated 1 April 1943.
Stabskompanie (staff company) according KStN 1150b dated 25 January 1943
 Four medium *Panzerkompanie* (22 StuG) according KStN 1175a dated 25 January 1943
 One PzWerkstKp (workshop company, without 1.Zug [platoon]) according KStN 1187 dated 1 June 1942.

Sturmgeschütz on the firing range during a unit's establishment phase: The vehicle mounts a 7.5cm StuK 40 L/48 and has a *Saukopf* (pig's head) gun mantlet indicating that it is a late series StuG. Note the gun barrel cleaning *Rohrwischer* (rod brush) leaning against the rear of the vehicle. (Anderson)

Establishment took place in France during the summer of 1943. At approximately the same time the KStNs for the PzStuGAbt in PzRgt were finally adapted, and at the same time the allotment of *Sturmgeschütz* was intended to be a provisional and temporary measure only. Subsequently, when new organizational structures were introduced in late 1943, neither the *Infanteriedivision* n A (*neuer Art* – new order) nor the 43.PzDiv would show any integral *Sturmgeschütz* subunits.

The mixed establishment of III. Abt/PzRgt 36 (14. PzDiv): The unit was sent to the Eastern Front in October 1943, and was equipped with 49 Panzer Ausf G IV (lang), 42 *Sturmgeschütz*, nine *Panzerbefehlswagen* (PzBefWg) command tanks and nine *Flammpanzer* III (flame-thrower tank). The Panzer IV tanks are fitted with *Seitenschürzen* (tank skirts). (Münch)







The *Seitenschürzen* (side skirts) were made up of two layers of armour; small inner plates (visible here) to protect the superstructure covered by larger plates to protect the vulnerable sides of the hull. The *Sturmgeschütz* carries the tactical number 421, which is repeated on the cupola. (Anderson)

Abteilungsstab according to KStN 1107 dated 1 April 1943

StbsKp PzStuGAbt according to KStN 1157 dated 10 April 1943

Four PzStuGKp (22 StuG) according to KStN 1158 dated 10 April 1943

One PzWerkstKp according to KStN 1187 dated 1 June 1942

On 3 June 1943, the *Generalinspekteur der Panzertruppe* published an instructional leaflet, which again underlined Guderian's principal reservations in regard to the *Sturmgeschütz*:

Instructional leaflet

Application of a StuGAbt within a PzRgt

- 1) Some PzDiv will be temporarily issued with *Sturmgeschütz* as an interim solution.
- 2) The PzAbt will receive 96 *Sturmgeschütz*
 Structure of the *Kampfstaffel* [combat echelon]:
 Staff section: five command tanks (PzKpfw III)
 Staff company (reconnaissance and *Zug*) five StuG
 1. to 4. Company: KpTrp (co HQ) two StuG
 1. to 4. *Zug* each with five StuG
- 3) Compared to the PzKpfw IV the *Sturmgeschütz* has certain advantages:
 - a) Thicker frontal armour (beginning in April, new production PzKpfw IV will have the same level of protection).
 - b) Its low height results in a small target.

Disadvantages:

- a) The lack of commander's cupola results in poor observation [from December 1942, all new StuG were fitted with a cupola].
 - b) Due to the lack of traverse, no all-round fire is possible.
 - c) Lack of a machine gun with all-round fire results in impaired close defence.
- 4) The performances and characteristics of the *Sturmgeschütz* do not allow an independent deployment without support of Panzer or PzGren. Due to its advantages, the *Sturmgeschütz* can be considered a tank destroyer. Thus deployment of PzAbt with StuG within the PzRgt and the PzDiv is clearly determined.
- 4) Assault:
- a) The StuGAbt cannot fight independently like a PzAbt. Close cooperation with Panzer or PzGren is necessary. Thus StuG will be deployed in the last wave, closely connected with PzGren.
 - b) PzAbt equipped with PzKpfw III or PzKpfw IV with thin armour can be reinforced by StuG platoons or companies to accomplish limited missions. The *Sturmgeschütz* will then be deployed in the front lines.
 - c) When encountering enemy tanks, StuG units will advance allowing the other PzAbt to surround and subsequently totally destroy the enemy tanks.

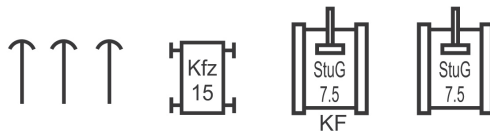
Cleaning the bore of a gun barrel with a stiff *Rohrwischer* (rod brush) required a serious amount of muscle power. It was important to regularly clean the rifling as a build-up of residues could cause a barrel burst. (Anderson)



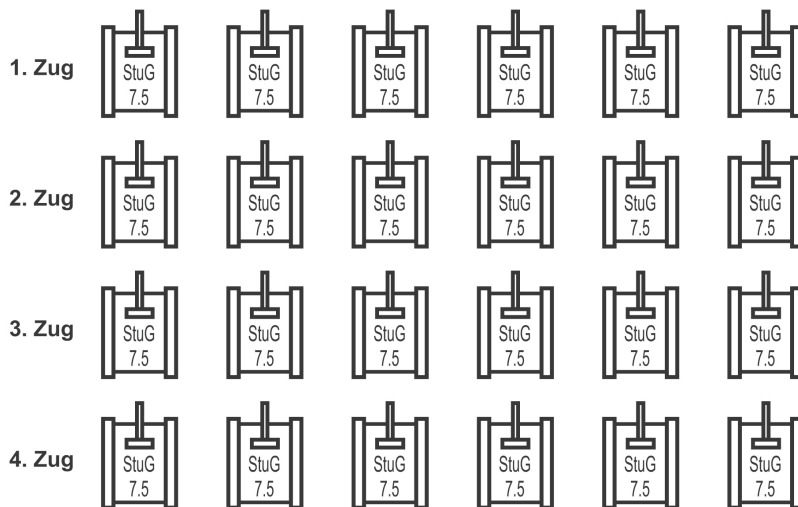
Panzer-Sturmgeschütz Company

Table of organization with 22 *Sturmgeschütz*, according to KStN 1158, 1 November 1943.

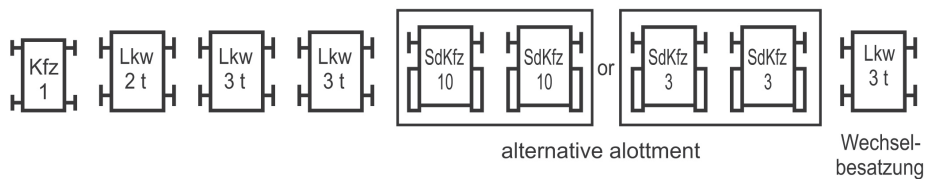
Kompanietrupp



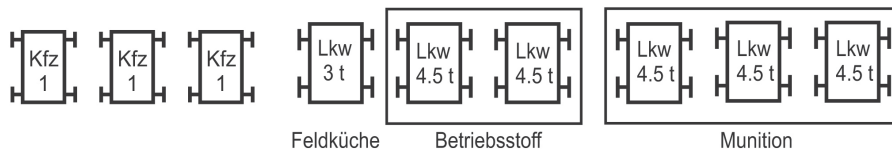
Gefechtsstaffel



Kfz Instandsetzungsgruppe



Gefechtstross



Gepäck-Tross



- d) StuG units deployed as tank destroyers will follow the open side of the PzRgt, so that they can guard the flanks and assist the PzAbt when engaging enemy tanks.
 - e) In case PzGren are deployed to create the requirements for the PzRgt's mission, the StuG units can assist with their gunfire.
- 6.) Defence
On the defensive, StuG units will be reserved ready to counterattack and supported by PzGren. The *Sturmgeschütz* will be used as tank destroyers.
- 7.) Retreat
During attacks with limited targets, *Sturmgeschütz* can assist when disengaging from the enemy.

Heinz Guderian

Having in mind the conceived limitations of assault guns, these guidelines appear appropriate. While the *Sturmgeschütz* were not intended for tank-versus-tank combat, occasionally this did happen if a commander made an error on the battlefield.

From March to October 1943, 14.PzDiv was positioned in France for refitting and training. The unit received its new *Sturmgeschütz* spasmodically, as noted in the following strength report dated 1 September 1943:

	<i>Sturmgeschütz</i>	PzKpfw III	PzKpfw IV	PzKpfw V
Authorized target	49	18	142	3
Combat ready	38	39	9	–
In workshop	6	7	3	–

The gap between the delivered StuGs and PzKpfw IVs provides a hint as to the situation at the manufacturers. The surplus PzKpfw III were in part, tanks authorized for the flame-thrower platoon and the *Funklenk* (Fkl) platoon. Possibly some were used as substitutes for the missing PzKpfw IV (the large authorized target would soon be reduced) and the PzKpfw V Panthers used as training vehicles. At that time, the commander referred to his unit as a *Kampfgruppe* (combat group) rather than a Panzer division.

A month later, 14.PzDiv had deployed to Russia and fighting at Krivoj Rog, in the northern region of the Crimean peninsula. At that time only III.Abt/36. PzDiv was available, and had a mixed establishment of two StuG companies and two PzKpfw IV companies. This fact proves that given standards were easily adapted by the unit's leadership, who in fact were forced by reality. The commander *Oberst* Unrein reported 30 StuG out of 44, and 31 PzKpfw IV out of 49 as being operational. Panthers had not been issued at that time. In his report he noted PzGrenBtls 9.Kp, with their 15cm s IG 33 as missing and deplored the shortage of radio-equipped SdKfz 250.



A *Sturmgeschütz* of III.Abt/PzRgt 24 hidden under the branches of trees in a fruit orchard. In early summer 1943, the vehicles of this unit were fitted with smoke candle dischargers on the superstructure. The chassis number of the vehicle, 95210 is painted on the front plate. (Anderson)

On 7 December 1943, Unrein submitted an after-action report, principally affirming (or zealously copying) Guderians list of shortcomings:

After-action report on the commitment of *Sturmgeschütz* within the scope of a *le Panzer-Abteilung* [light tank battalion]

For the commitment in the east III.Abt/36 was equipped as follows:

Two Kp and recce platoons with PzKpfw IV (<i>lang</i>)	= 49
+ four PzKpfw IV (<i>lang</i>).	
Two Kp with StuG	= 44 StuG

The first combat took place on 28 October 1943, and the action continued until 1 December 1943. The commitment of *Sturmgeschütz* took place as follows:

- 1) In the first wave of the attack
- 2) In the second wave as flank guard
- 3) In close cooperation with *Panzergranadiere*
- 4) In the defensive operation

All four methods were practically tested over the six-week commitment, resulting in the following experiences.

Item 1.)

The commitment of the StuG in the first wave had only the advantage of offering a smaller target. We noticed the following disadvantages: thanks to its turret, a tank commander can observe the direction of the assault, and is able to combat targets emerging from both sides. In contrast, the *Sturmgeschütz* must always turn head-on to the enemy. These turns delay combat of these targets and slow down the speed of the tank advance. This will be even more difficult during the mud season. The [StuG] driver has to brake repeatedly to point the barrel in the required direction. The rapid steering movements overstress the gearbox and especially the brakes. Very heavy soil led occasionally led to a thrown track. When breaking through enemy infantry positions containing anti-tank rifles, the lack of a close-defence machine gun with armour protection was crucial. The machine gun shield is not sufficient against anti-tank rifle fire from the front, and offers no protection against infantry fire from the side.

Item 2.)

Sturmgeschütz proved to be more suited for use in the second wave or guarding the flanks. Any enemy counterattack can effectively be neutralized. However, if a menace from the flanks has to be encountered with a counterattack, the same weaknesses occurred as explained under item 1) ...

Item 3)

Sturmgeschütz performed best when committed in close cooperation with *Panzergranadiere*. StuGs will give the PzGren strong moral support, especially

Despite their undoubted advantages, smoke candle dischargers on the *Sturmgeschütz* were soon removed, as they easily ignited after receiving a hit by small arms fire or shrapnel. (Anderson)





The mighty *schwere Zugkraftwagen* (s ZgKw – heavy tractor) 18t (SdKfz 9) was one of the most valuable vehicles in a Panzer unit. A *Sturmgeschütz* from III. Abt/PzRgt 36 is being used to attempt a recovery, but the narrow tracks on the assault gun had poor traction and there was the danger that it would also become bogged down. (Münch)



when engaging attacking enemy tanks. Supported by the PzGren, *Sturmgeschütz* can combat the enemy's heavy weapons... the PzGren will guard the StuGs against enemy infantry and anti-tank rifles.

Item 4)

Sturmgeschütz performed well in defensive fighting. Committed as mobile anti-tank defence by using prepared positions, the enemy was effectively combated.

Survey of successes and losses of the mixed 1e PzAbt from 28 October until 1 December 1943

Success	Tanks	Anti-tank guns	Artillery	Own losses
Panzer IV	136	117	20	20
StuG	75	59	34	16

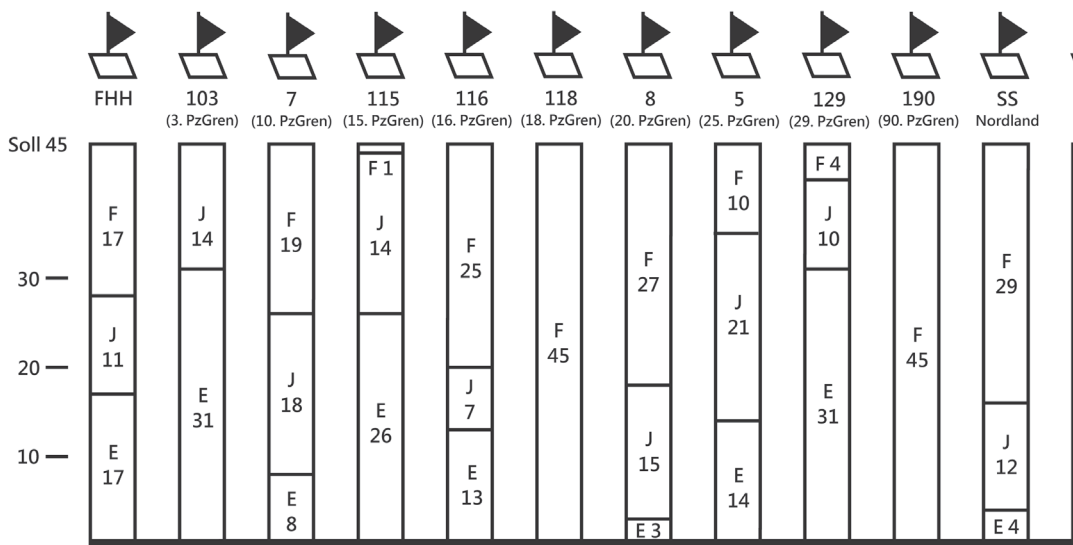
In conclusion, it can be stated that in a mixed PzAbt, the PzKpfw IV proved to be superior to the *Sturmgeschütz*, especially during attack missions.

Indeed this after-action report reveals nothing new, as StuGAbt fighting in the east had to deal with similar problems. The establishment of *Begleitgrenadier-Batterien* (escort grenadier batteries) was the logical answer

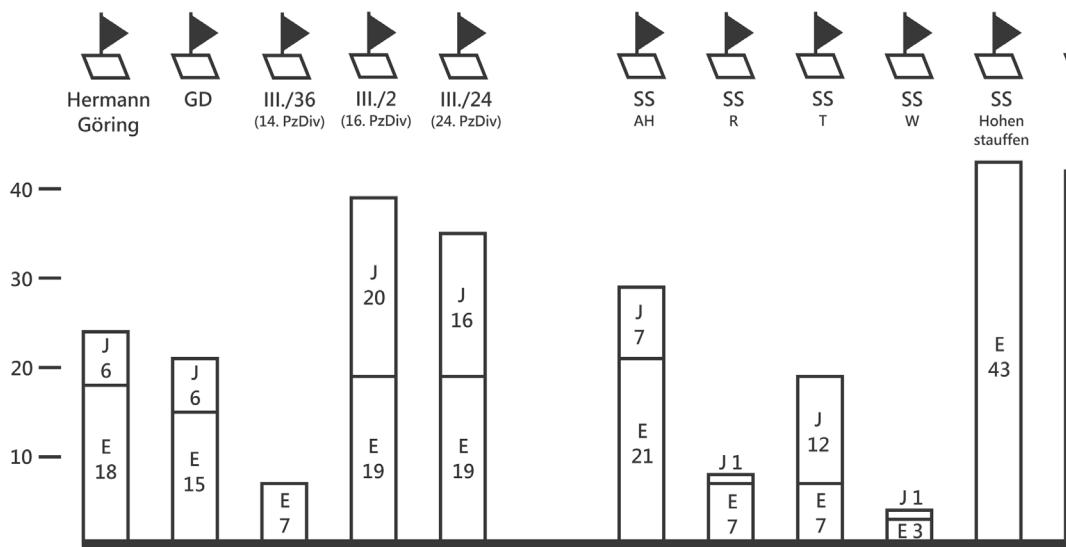
A *Sturmgeschütz* Ausf G parked outside the shop of a ladies' tailor in a small French town. The vehicle is fitted with a cast *Saukopf* (pig's head) gun mantlet which indicates that was produced in 1944 by Alkett. Note that it is fitted with later type mounting brackets and rails for the *Seitenschürzen* (side skirts). (Hoppe)

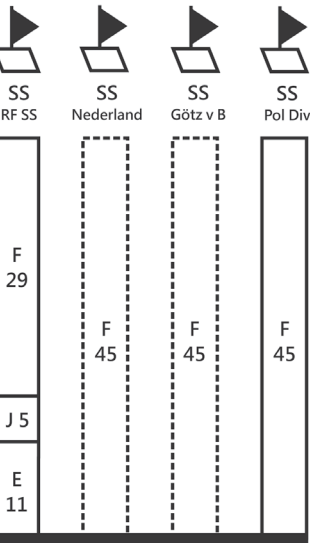
StuG-Abteilungen in PzDiv and PzGrenDiv

PzGrenDiv:

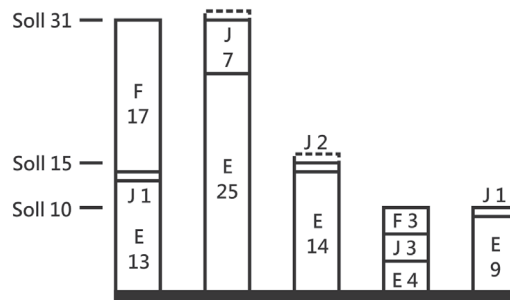
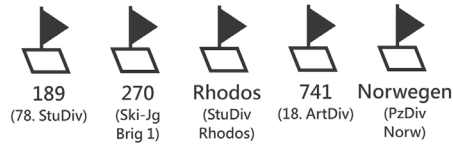


PzDiv:





Miscellaneous:



Zusammenstellung

<u>PzGrenDiv</u>		Target	Actual	Shortage
Number of Abt in Combat	13	585	289	296
<u>PzDiv</u> (temporarily issued with tanks)				
Number of Abt in Combat	11	—	270	—
<u>Misc units</u>				
Number of Abt in Combat	5	97	79	18
<u>New Formations</u>				
	2	90	—	90
Shortage Total				404



The crew of a *Sturmgeschütz* from 90.PzGrenDiv has carefully concealed their vehicle on the edge of wood. In such a position gun traverse would be very limited and should it come under fire it would be almost to move out rapidly. (Anderson)

to the threat imposed by Russian infantry equipped with large numbers of anti-tank rifles capable of penetrating the thin side armour on the StuG or Panzer IV.

In theory, the three Panzer divisions with integrated PzStuGAbt were of significant combat value. However, the maximum allotment of 96 Panther, 96 PzKpfw IV and 96 StuG proved to be nothing but a pipe dream. Normally the II and III.Abt would have been merged. In the case of 14.PzDiv, its I.Abt with only ten PzKpfw V Panthers was attached to PzBrig 10 that was being established in France during summer, 1943. Thus 14.PzDiv lost its intended allotment of Panther tanks. Bearing in mind the actual allocation of StuG and PzKpfw IVs, the unit's combat power decreased to 30 per cent of the initially authorized strength; 14.PzDiv would wait until August 1944 to receive Panthers.

***Sturmgeschütz* in PzGrenDiv**

At the start of World War II, the tank turned out to be a battle-deciding weapon. The successful operations during the invasion of France and the Balkans, and later in North Africa and Russia were decisively pushed forward by tanks.

Infantry divisions normally lacked this offensive potential. The temporary or permanent subordination of armoured elements was a solution.

Fully aware of this problem, a number of German infantry divisions were issued with PzAbt by mid-1942, making best use of the limited resources. Among these units were PzAbt 103 (3.InfDiv), 116 (16.InfDiv), 129 (29. InfDiv) and 160 (60.InfDiv) and 190 (90.le Div).

These battalion-size tank detachments were organized according to the 1942 Panzer division standards. Each *Abteilung* had two *leichte* and a *mittlere Panzerkompanie*, or, according the actual delivery situation, three m PzKp. Indeed there were many exceptions from the rule.

When the new GenInsp d PzTrp Guderian enforced the reforming of the *schnelle Truppen* to the *Panzertruppen* in April 1943, he also ordered a new form of organization for selected infantry divisions, the PzGrenDiv. After reorganization these motorized units were put under his control. Some of the new PzGrenDiv still had a small number of tanks, but in future *Sturmgeschütz* were to be issued. Initially Guderian was allotted 100 assault guns a month. This is confirmed by a memorandum dated 26 August 1943, in which Guderian reported the following *Sturmgeschütz* deliveries for the *Panzertruppe*:

d) <i>Sturmgeschütz</i> issued since 1 August 1943:	
14.PzDiv	Four (in total 44)
Fkl Kp 315	10
10.SS Division	34
11.SS Division	14

A *Sturmgeschütz* of PzAbt 190 (90.PzGrenDiv): The Zimmerit coating has been applied in the checkerboard pattern as used by MIAG. A *Balkenkreuz* and the tactical number 223 have been stencilled on the *Seitenschürzen*. (Anderson)





In formation are:

PzJgAusbAbt 3, 5, 9	15
One Fkl Kp (of July)	10 (subsequent delivery)
16.PzGrenDiv	14
10.PzGrenDiv	12
20.PzGrenDiv	12

Furthermore the September planning has to be considered:

10.PzGrenDiv	30
20.PzGrenDiv	30
18.PzGrenDiv	42
16.PzGrenDiv	28

In September 1943 a new organizational structure was published, the 43.PzDiv As the successor to the motorized infantry division, the unit



To defeat the Allied forces which had landed at Anzio on 22 January 1944, the Germans assembled a strong force to halt a breakout and advance into Italy. The *Sturmpanzer* is in service with StuPzAbt 216; the Panther is with PzRgt 4. The *Sturmgeschütz* is from either 3.PzGrenDiv, or PzAbt (Fkl) 301. None of these weapons proved to be effective in the difficult conditions encountered on the battlefield in southern Italy. (PeKo)

comprised two *Grenadier-Regimenter*, a formidable PzJgAbt with two PzJgKp (Sfl/SP) and a PzAufklAbt (tank reconnaissance battalion) and a *Heeres-Flugzeugabwehrkanone-Artillerie-Abteilung* (HFlaKArtAbt – army anti-aircraft battalion), and also other support services. To underline the offensive character of the new unit, a *Sturmgeschütz* detachment of 45 StuG was added, replacing the three tank companies. The decision to issue *Sturmgeschütz* in place of tanks followed the same requirements as those for 14, 16 and 24.PzDiv. This is confirmed by an entry in the war diary of the OrgAbt on 10 December 1943:

Amendment:

31 October 1943

Since tank production is, at this time, not sufficient to equip all PzDiv with a PzKpfw IV Abt or a PzKpfw V Abt, and all PzGenDiv with a PzKpfw IV Abt, a provisional solution was introduced. For 25.PzGrenDiv, a PzAbt with 45 *Sturmgeschütz* has been



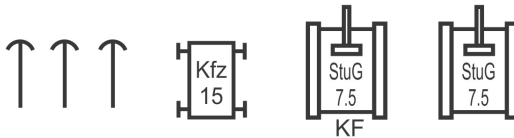
A train of goods wagons carrying German military equipment has been derailed by Italian partisan forces at Vincenza in the north of Italy. The *Sturmgeschütz*, possibly from PzAbt 190, is a late production vehicle and is fitted with a remote-controlled *Rundumfeuer-Maschinengewehr* (all-round fire machine gun). (PeKo)



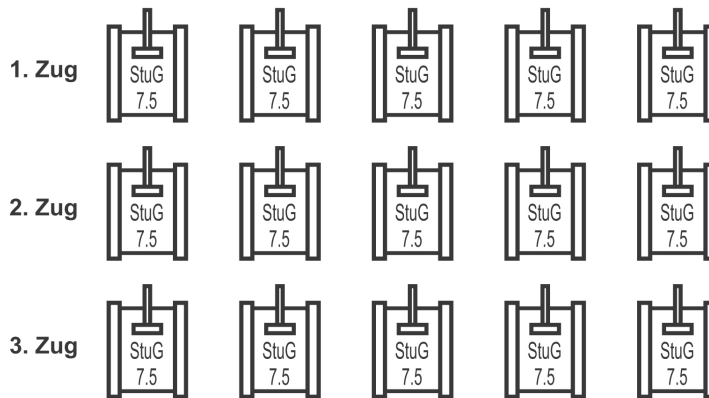
Panzer-Sturmgeschütz Company

Table of organization with 14 Sturmgeschütz, according to KStN 1158, 1 November 1943.

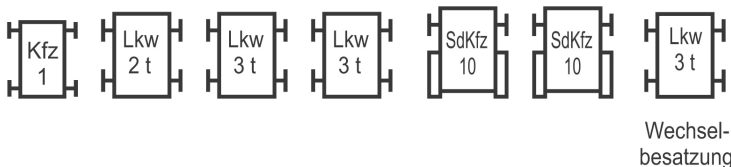
Kompanietrupp



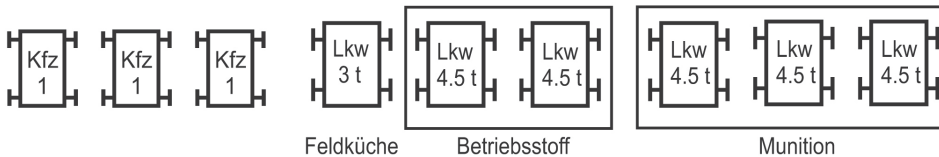
Gefechtsstaffel



Kfz Instandsetzungsgruppe



Gefechtstross



Gepäck-Tross

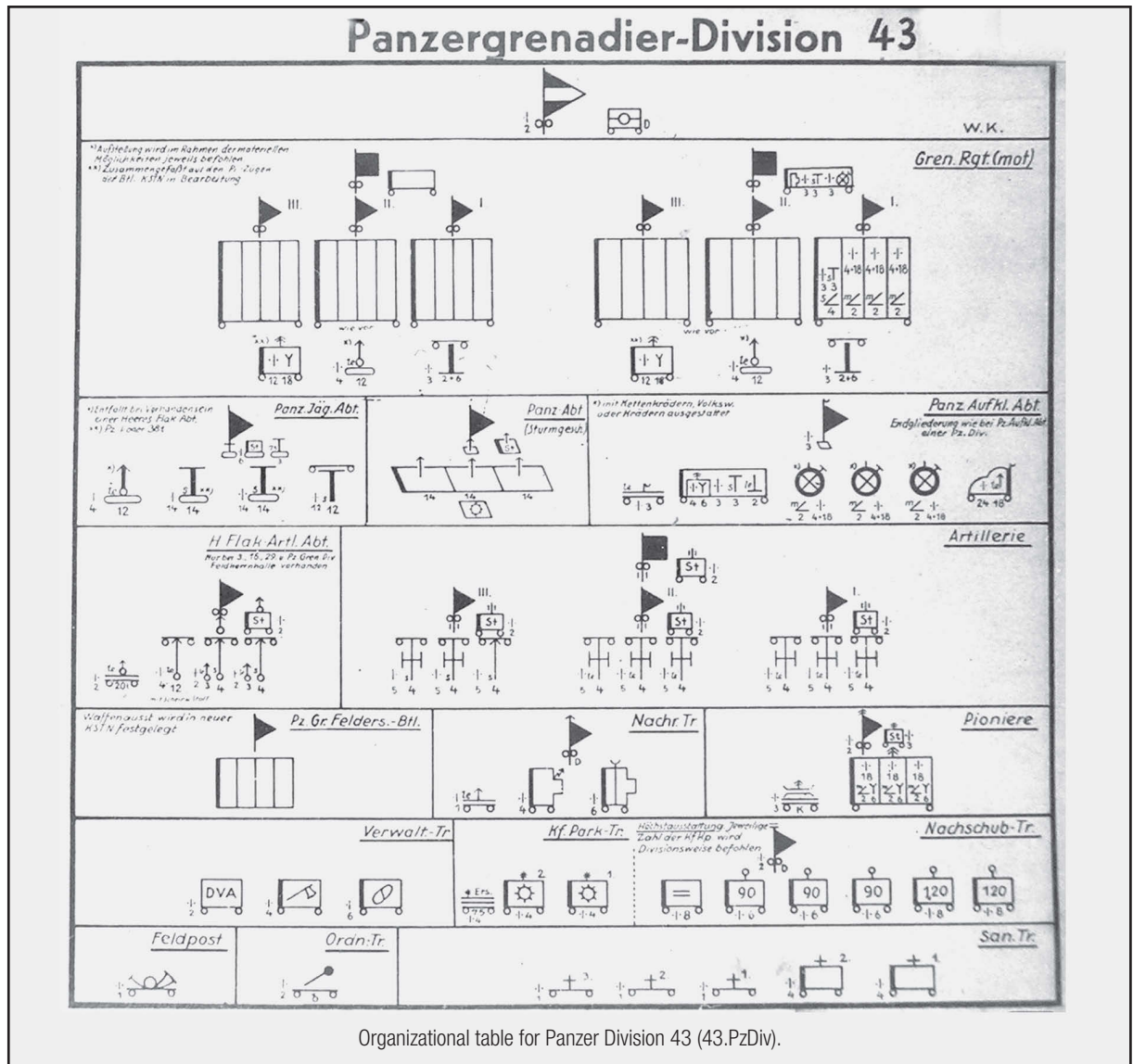


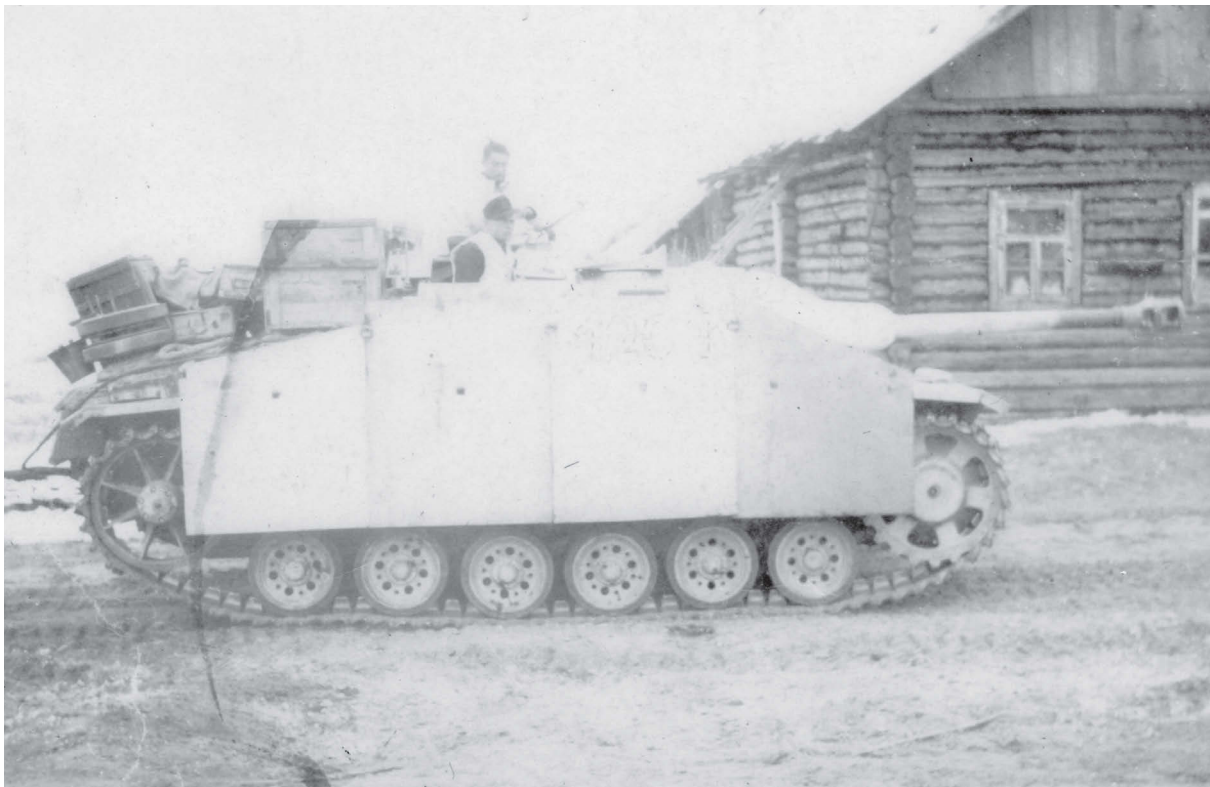
established and will be incorporated as a PzAbt. All existing tanks will be diverted to a PzDiv in *Heeresgruppe Mitte* [Army Group Centre].

However, the 'provisional solution' would continue for longer than anticipated.

For implementing in PzGrenDiv, the following organizational structures were published:

Abteilungsstab (battalion staff) according to KStN 1107 dated 1 April 1943
StabsKp (staff company) PzStuGAbt according to KStN 1157 dated 10 April 1943





The *Sturmgeschütz* Ausf G of III. Abt/PzRgt 36 (14. PzDiv) mounting 7.5cm StuK 40 L/48 with a *Saukopf* (pig's head) mantlet. The vehicle has been camouflaged with whitewash paint and has the tactical number 1201 stencilled on the *Seitenschürzen* (side skirts). (Anderson)

Three PzStuGKp (14 StuG) according KStN 1159 dated 20 June 1943
 One PzWerkstZug (workshop platoon) according KStN 1187 dated 1 June 1942

In June 1943, orders had been given to establish ten PzGrenDiv by converting or renaming existing infantry divisions:

PzGrenDiv Feldherrnhalle (FHH)
 PzGrenDiv Grossdeutschland (GD)
 3. PzGrenDiv
 10. PzGrenDiv
 15. PzGrenDiv
 16. PzGrenDiv
 18. PzGrenDiv
 20. PzGrenDiv
 25. PzGrenDiv
 29. PzGrenDiv
 90. PzGrenDiv

A number of Waffen-SS units had also been reorganized, and some were in the process of being reorganized to PzGrenDiv:

SS - *Nordland*
Reichsführer - SS
SS - *Polizeidivision*
SS - *Nederland* (in formation)
SS - *Götz von Berlichingen* (in formation)

Due to the current situation (combat and insufficient production) these organizational changes could not be implemented immediately but did over an extended period. Lack of personnel and material restrictions created a desperate situation, and it took longer to convert all the units to 43.PzGrenDiv standards.

Many PzJgAbt in Italy, planned to be refitted to 43.PzGrenDiv, had to be equipped with Italian-built *Semovente* until replacement *Sturmgeschütz* were delivered from Germany. A German crew drives a 105mm *Semovente* M43 105/25 up a steep incline during training on the type. (BAMA)





A *Sturmgeschütz* and a column of Borgward B IV Ausf B *Ladungsträger* (demolition charge carriers) from Panzer *Versuchs- und Ersatzabteilung* (PzVersAbt – experimental and replacement battalion) 300(Fk): The StuG is possibly an experimental *Leitpanzer* (control tank), but the additional aerial for the radio-control equipment is not fitted. (Anderson)





A German soldier, from an unknown unit, stands beside an Italian-built *Semovente da 105/25*. In German service it was designated '*Sturmgeschütz M43 mit 105/25 853 (i)*'. The vehicle is finished in Italian-style camouflage, but has a prominent *Balkenkreuz* painted on the superstructure. (Regenberg)

In October 1943, the OKH gave orders to reform 90.PzGrenDivs:

Subject: Reallocation of 90.PzGrenDiv to 43.PzGrenDiv standard

I.) 90.PzGrenDiv

The unit will be reformed according to '43.PzGrenDiv' standard as soon as conditions allow.

II.) Organizational regulations:

3.) PzAbt 190

PzAbt 190 has to be reformed as a PzAbt (*Sturmgeschütz*)... Until a regular supply of *Sturmgeschütz* is achieved, a mixed establishment with PzKpfw IV has to be accepted (existing PzKpfw IV will be deployed as *Sturmgeschütz*). However, within the single companies a common stock has to be ensured.

5.) PzJgAbt 190

b) The PzJgAbt will be issued with Italian-supplied *Sturmgeschütz* [*Semovente*]. Respective orders for the training on these types will be given later.

IV. Transport

a) Motor vehicles

All motor vehicles must be taken from stocks of captured (Italian) equipment.

b) Weapons and Equipment

Missing German and Italian *Sturmgeschütz* will be replaced by the office of the *Generalinspekteur der Panzertruppen*.

The above confirms the enormity of the problem faced by the *Organisationsabteilung*, the German army and finally the units in the field. Organizational changes could not be implemented within a feasible timescale, and short-term allotment of material was not guaranteed; units had to live with mixed establishments. In the case of 90.PzGrenDiv, the tank destroyer battalion had to be content with Italian-built *Semovente* (self-propelled) guns.

This practice led to a non-standardized establishment within the mother unit and the usage of PzKpfw IV, StuG III and Italian *Semovente*, caused serious problems with the supply of spare parts to the workshop units.

All PzGrenDiv were fully-independent units, but their combat strength existed merely on paper: 10.PzGrenDiv is a prime example. The division emerged from what had been the 10.InfDiv, and was reorganized at the same time it was re-equipped in the area of *Heeresgruppe Mitte* during April/May 1943. The division was deployed for *Unternehmen Zitadelle* (Operation Citadel), and was involved in defensive action to halt Soviet counterattacks to Orjol/Brjanks. The unit was then sent to *Heeresgruppe Süd* (Army Group South), to participate in defence of the river Dniepr, followed by a slow retreat to Kirovograd. The division's PzAbt 7, was authorized to have 45 *Sturmgeschütz*, but on 31 October reported that it had only three assault guns and all were in need of repair. Two weeks later, the *Sturmgeschütz-Lage*

A new *Sturmgeschütz* M43 mit 105/25 ready for delivery to a German unit: the relatively light 16-ton vehicle was powered by a 192hp FIAT-SPA engine and had a top speed of 38kph. When the type entered Italian service in April 1942 the troops gave it the name *Bassotto* (Dachshund). (BAMA)



(a strength list prepared every 14 days by the GenStbdH) still reported only three *Sturmgeschütz*, but two were ready for combat and one was in need of repair. However, the list showed the authorized strength of 42.

Reinforcements finally reached the unit in late November, bringing it up to authorized strength.

After a series of battles fought between 30 November and 4 December, PzAbt 7 submitted an after-action report:

30 November 1943

Unloading of the *Stabskompanie*, 3.Kp and *Werkstatt-Zug* in Bobrinskaja.

1 December 1943

Attack with 3.Kp, attached to 3.PzDiv west of the *Rollbahn* [railway track] to Cherkassy in close cooperation with PzGren and PzAufklAbt. We crossed an anti-tank ditch and several trench systems. One PzBefWg [reconnaissance tank] was lost due to a direct hit after being ordered to scout towards Cherkassy.

2 December 1943

Attack by the Abt attached to 72.InfDiv (without 3.Kp, which remains with 3.PzDiv) supported by 1.Kp and 2.Kp with a total of 24 StuG. The advance penetrated enemy positions near Dolgaja-Grab, Plisnezy-Grab on the northern boundaries of Kirilovka. After fighting against several anti-tank guns, a farm was taken. Our infantry is weakened (100 men with two light machine guns, young recruits and Romanian-Germans) and cannot be forced further. Due to ammunition shortage, the battalion is forced to retreat for 2km. a second advance cannot be launched due to nightfall. The failure of the attack was attributable to insufficient preparation, hasty issue of orders and very weak infantry support due to inexperienced troops.

3.Kp fought with 3.PzDiv to clear the southern boundaries of Cherkassy and the *Rollbahn*.

3 December 1943

PzAbt 7 with 1.Kp and 2.Kp again attached to 3.PzDiv, reached positions 3km south of Kurgan-Grab... Due to mechanical failures during the previous day the Abt has been reduced to 13 *Sturmgeschütz*, and combined into one company under the command of *Oberleutnant* Schönherr. The company is attached to the regiment. At 11.00hrs the attack on Kirilovka begins, in close-support of the infantry southern parts of Kirikova are soon captured. However, our infantry is forced to retreat from the village by a Soviet counterattack supported by five T-34s accompanied by infantry. Schönherr then attacks and destroys three T-34s, before pulling back by 300m. After reforming, a further attack delights our infantry and the action ends with the successful capture of the complete village. The night hours are spent securing the village, eating, sleeping and collecting supplies.

4 December 1943

Seven *Sturmgeschütz* under command of *Leutnant* Marré commenced an attack in a northerly direction, attacking and defeating enemy anti-tank guns, before crossing the main railway line. During the fight three T-34s were destroyed,



and the line was cleared. They then continued to advance a further 2km, during which another two T-34s were destroyed.

5 December 1943

Elements of PzAbt 7 are being pulled out of the front line and transported by rail to northern area of Kirovograd.

By the end of the deployment, PzAbt 7 had reported the destruction of 11 enemy tanks (ten T-34, one M4 Sherman) and 19 anti-tank guns for the total loss of one reconnaissance tank and six *Sturmgeschütz*. On 10 December 1943, the strength report stated that PzAbt 7 had 15 *Sturmgeschütz* operational and 21 in need of repair.

This report also shows that PzAbt 7 was deployed away from 10.PzGrenDiv, its parent unit, another problem that was widespread among many German units on all fronts: The reason was the ever-present shortage of armoured fighting vehicles – a problem that worsened as the war progressed.

A *Sturmgeschütz* M43 concealed in an ambush position. In October 1943, it was ordered that 3.PzGrenDiv, 15.PzGrenDiv, 29.PzGrenDiv and 90.PzGrenDiv were to be the first units equipped with the '*Sturmgeschütz* M43 mit 75/46 and M43 mit 105/25'; others would follow. German crews operating the type considered it to be a very good combat vehicle. (Regenberg)



Special Formations 4

Up until the beginning of 1943, the majority of *Sturmgeschütz* were issued to *Sturmgeschütz-Abteilungen* commanded by the *General der Artillerie*. At around this time the *General der Artillerie* fought a battle with the *General der Schnellen Truppen*; their *Waffenoffiziere* (ordnance officers) and subordinates were given a high level of autonomy to liaise between the *Oberkommando des Heeres* (army high command) and the respective services in reference to allocation of equipment, training, deployment and improvements.

In April 1943, the *Schnelle Truppen* was disbanded and replaced by the *Panzertruppen*. General Guderian, who initiated and monitored this process, then took command of this new service. As part of his reorganization, Guderian passed responsibility for the *Kavallerie* (cavalry) and the *Radfahrtruppen* (bicycle troops) to the infantry so that he would be able to concentrate on the *Panzertruppen*, *Panzergranadiere*, *Panzerjäger*, *Panzeraufklärung* (armoured reconnaissance) and *Eisenbahn-Panzerzüge* (armoured railway trains). After his reorganization he was certainly the most influential *Waffenoffizier* in the German military.

When a *schweres Sturmgeschütz* (heavy assault gun) – built using the chassis of ill-fated Porsche design for the Tiger tank – which mounted the powerful 8.8cm PaK 43/2 L/71 gun became available, it was issued to two *schwere Sturmgeschütz-Abteilungen*, still following the ‘old order’. The *General der Artillerie*, who had for a long time been demanding a heavy weapon for ‘his’ *Sturmartillerie*, saw this come true. However, matters would develop in a different direction. Guderian ordered that the *schwere Sturmgeschütz* come under his control. Re-designated as *schwere Panzerjäger*, these weapons (SdKfz 184s known as Ferdinand; later *Elefant*) and their respective units were transferred to the *Panzerjägertruppe* and formed *schwere Panzerjäger-Abteilung* (s PzJgAbt – heavy tank hunter battalion) 653 and 654.

A *Sturmgeschütz* Ausf G in service with StuGBtr 247 attached to StuDiv Rhodos. A Maltese cross, the unit's emblem, has been stencilled on the glacis plate, together with the tactical marking for an assault gun. (PeKo)



A late production StuG Ausf F of StuDiv Rhodes: Note the 30mm of additional armour welded to the front and the longer-barrelled 7.5cm StuK 40 L/48. The bullet traps in the superstructure have been covered with concrete and also extra armour has been fitted to the side panniers. In the background are the medieval fortifications of Rhodes. (PeKo)

At around this time, the *General der Panzertruppe* was promised a regular proportion of the 100 *Sturmgeschütz* produced each month to make up the shortfall in tank production. Furthermore, a number of *Sturmgeschütz* units were removed from responsibility of the *General der Artillerie* and attached indefinitely to army units.

78.StuDiv with StuGAbt 189

By end of 1942, 78.InfDiv had almost been annihilated during the defensive battles near Rshev. The surviving units were pulled out of the front line to be replenished and reorganized. As a division of a second-level establishment, 78.InfDiv (or 78.Div) originally had three infantry regiments, each with eight companies and had a motorized *schnelle Abteilung* (rapid battalion) formed of reconnaissance and tank destroyer elements. The artillery regiment relied on horse-drawn guns and had an authorized strength of nine 15cm *schwere Feldhaubitze* (s FH – heavy field howitzer) 18 and 27 10.5cm *leichte Feldhaubitze* (le FH – light field howitzer) 18.

In early 1943 orders were given to re-establish 78.Div to a new structure; a *Sturmdivision* (assault division). The reason for the creation of this *Sonderverband* (special unit) was to create an infantry formation with enhanced offensive power, possibly as a pattern for future assault divisions.

An early organizational table for a new assault division shows three infantry regiments each with only four companies, a significant reduction. However, this was compensated for by being equipped with improved weapons for the infantry. The artillery elements were to be dramatically improved by adding *Panzerartillerie* (tank artillery) with an unspecified number of *Selbstfahrlafette* (Sfl – self-propelled [SP] guns), the artillery element was to be motorized. To underline the offensive character, an assault gun battalion was to be assigned long term to 78.Div; subsequently StuGAbt 189 was disbanded from the *Heerestruppen*. The three batteries of StuGAbt 189 (each with seven StuG) remained organized according KStN 446. The staff battery comprised recovery, workshop and supply services.

However, 78.*Sturmdivision* (StuDiv – assault division) would never receive the *Panzerartillerie*, as shown on later organizational tables.

An after-action report, dated 16 March 1943, submitted by 78.StuDiv after its first battle near Orel reveals a number of shortcomings:

Subject:

The deployment of 78.StuDiv from 27 February to 15 March 1943: preliminary experience concerning the organization.

The tactical number 100 identifies this as the StuG of the commander of StuDiv Rhodos 1.Kp. This assault gun was equipped as a *Befehls-Sturmgeschütz* (command assault gun); note the the *Sternantenne 'd' mit Panzertopf* (star antenna 'd' with armoured pot mounting). The markings on the front of the vehicle were also repeated on the rear plate. (PeKo)



A Sturmgeschütz

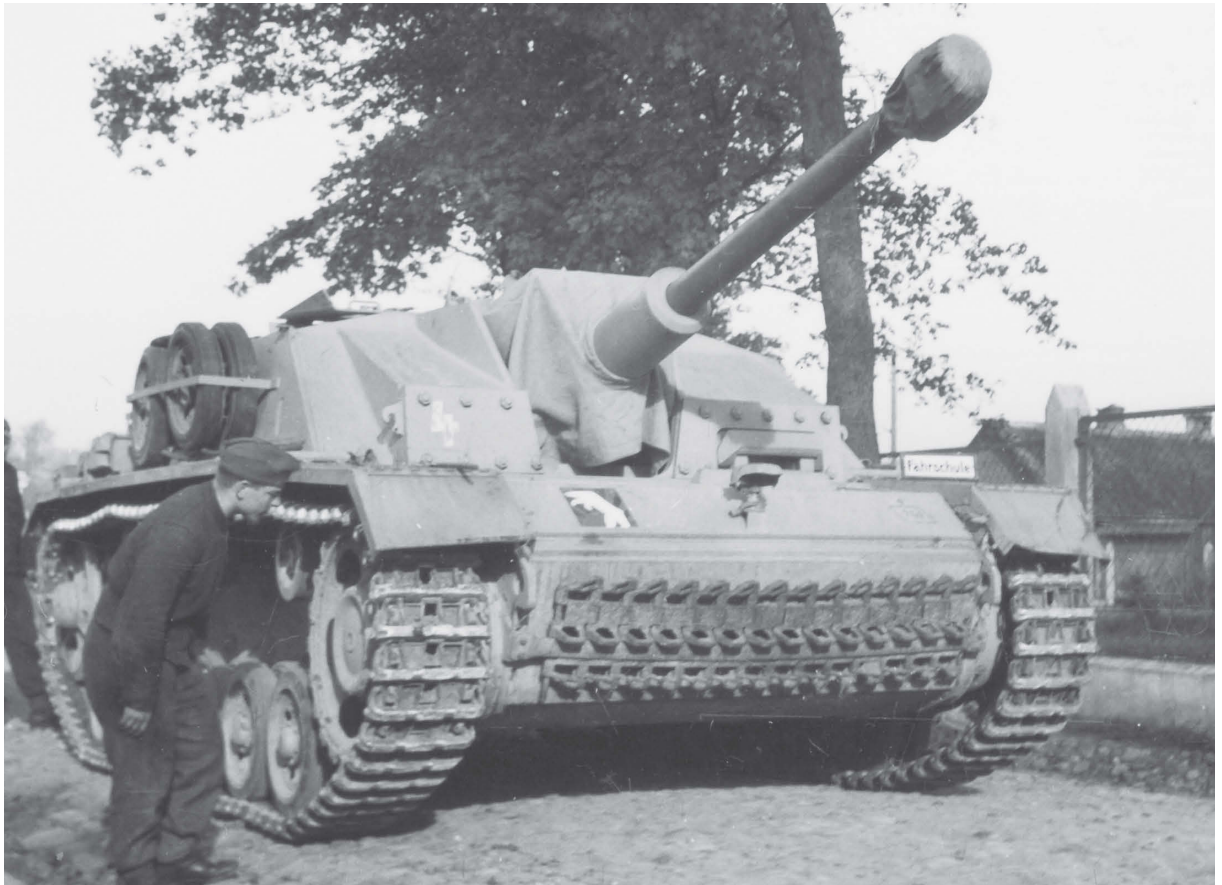
Ausf G of StuDiv Rhodos fitted with smoke candle dischargers. The crew has mounted additional spare road wheels on the track covers. (Beraud)

I. Deployment

- 1) The division was attached to XXXVI.PzKp with elements of the *Kampfstaffel* [combat echelons], with two reinforced *Sturmregimenter* [assault regiments] to avoid a breakthrough by enemy forces at Dmitrovsk (78km southwest of Orel). The advance of the reinforced StuRgt 14 and StuRgt 215 by continuous day and night marches was slowed by narrow tracks, snow-drifts on roads and several blizzards. To avoid the impending enemy breakthrough, the division could not wait for the arrival of heavy weapons and artillery.

Our attacks were made against superior enemy forces, which in parts showed a notably higher degree of combat readiness. Many attack missions were hindered by chest-deep snow, dense woodland and deep ravines.





The weariness of our troops, many with severe frostbite (caused by wet clothing freezing) had a negative effect.

The successful fighting against a dogged defence by the enemy led to heavy casualties in the grenadier and pioneer companies. When we turned onto the defensive, the many ravines impeded the movement of our heavy weapons. Enemy attacks by four to six rifle divisions were partly repelled after a fierce firefight.

- 2) The following figures give an overview of enemy losses during the period 28 February to 15 March 1943:

- 986 taken prisoner
- 4,486 casualties (counted)
- 950 (estimated)
- Six T-34 tanks
- 102 anti-tank rifles

Our losses over the same period:

- 682 wounded
- 310 dead

A *Sturmgeschütz* Ausf G of StuGBtr 741: Note the bear emblem for this unit and also the rhombus-shaped tactical mark for a StuG on the glacis plate. In September 1943 StuGBtr 741 was incorporated to 18.ArtDiv. This Ausf G was constructed using a PzKpfw III hull and has 30mm of armour welded-on. The vehicle carries the word *Fahrschule* (driving school) indicating that this photograph was taken when the unit was being established. (Anderson)



Our equipment losses were low. The success achieved by the division was reported by the *Wehrmachtsbericht* (army broadcast services) on 13 March 1943.

II. Preliminary experiences:

1) In the attack:

The StuRgt with its sole grenadier battalion has too little impact

2) Organization of the StuRgt:

Grenadier-Battalion

The StuRgt with one GrenBtl with four StuKp proved effective neither in the attack nor in the defence. Seen from the infantry aspect, the four companies are disproportionate to the great firepower of the heavy weapons of the regiment or division. The heavy weapons would allow a wider combat front that would allow the firepower of the infantry to be employed to best effect.

Sturmgeschütz-Abteilung:

The integration of this battalion in the artillery regiment did not prove successful.

Conclusion:

Detachment of the StuGAbt from the ArtRgt and directly attached to the divisional commander is advisable.



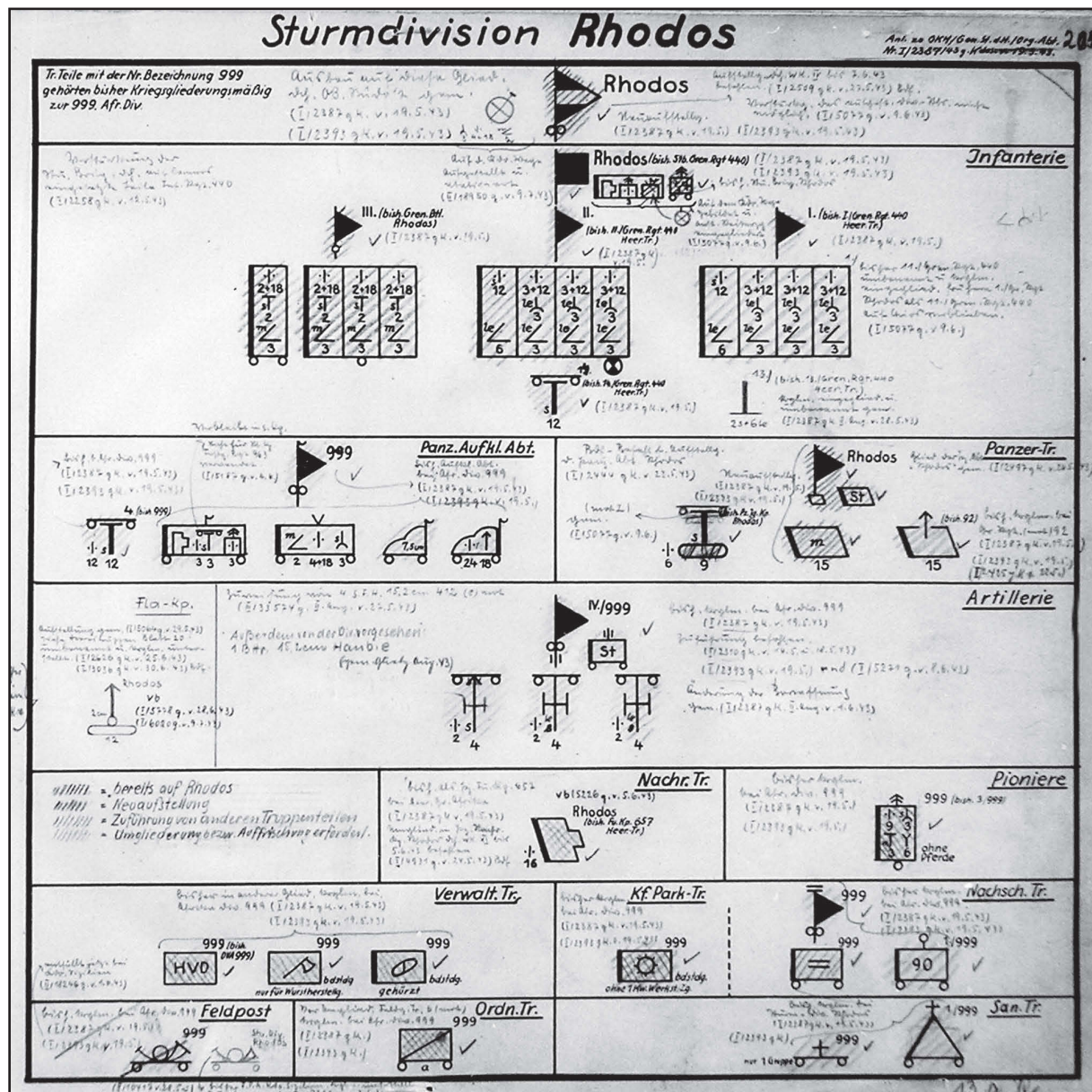
StuGBtr 742 was assigned to PzDiv Norwegen (Norwegian) but only for a relatively short time. Their *Sturmgeschütz* Ausf. G, were returned to Germany and then distributed to other units. The vehicles are not fitted with *Seitenschürzen* (side skirts) although they were a standard fitment by this time. (PeKo)

This after-action report describes the harsh conditions during the winter fighting on the Eastern Front. Although considerably redacted, the report finishes with a direct request for reorganization; this was realized in part. The organizational structure (after reorganization) proves that a considerable strengthening of the infantry (now 18 companies) had been accepted. As requested, the StuGAbt was detached from the artillery regiment.

In July 1943, 78.StuDiv was deployed, as part of 9.Army, for the attack on the Kursk salient. After the offensive was cancelled, the unit was used to defend against Soviet counterattacks around Smolensk, Bryansk and Jelnya. When the Red Army launched *Operatsiya* (Operation) *Bagration*, 78.StuDiv was deployed with *Heeresgruppe Mitte*. As the fighting progressed the division suffered heavy casualties and severe loss of equipment which brought it to the point of annihilation.

After the collapse of *Heeresgruppe Mitte*, what remained of the assault gun element was disbanded from 78.StuDiv and sent to Burg for re-establishment. Again it became StuGBrig 189, and formed as an independent *Heerestruppen* StuGBrig. In this form, 78.StuDiv was unique in the German army, and remained the only assault division in service.

In March 1943, an occupation force for the island of Rhodes was established; *Sturmbrigade Rhodos* was formed from elements of 22.InfDiv. This unit received an independent assault gun element, StuGBtr 247, equipped with ten *Sturmgeschütz*. In May, the brigade was reorganized as (StuDiv) Rhodos. The division was then allotted an additional tank company, forming PzAbt Rhodos with the assault guns of StuGBtr 247.



On 11 September 1943, StuDiv Rhodos attacked the Italian garrison in order to prevent them from surrendering to British troops, which had invaded a number of islands near Rhodes.

The *Sturmgeschütz* (numbered 100 to 109) formed 1.*Kompanie* (Kp – company) and 2.Kp was issued with PzKpfw IV tanks (numbered 200 to 209). A strength report dated December 1943 confirms ten StuG for StuGBttr 247. However, by the end of February 1944 the authorized strength was increased to 15 StuG. Despite its name, StuDiv Rhodos cannot be compared with 78.StuDiv.

***Skijäger* with StugAbt 279**

The first winter on the Eastern Front forced German military planners to hastily increase the number of ski-troops, to maintain a certain degree of mobility, and a number of ski-battalions were provisionally established.

Established in 1943, 78.StuDiv was intended to be an elite division with massive offensive firepower. This was further enhanced when the newly-established StuGAbt 189, with 22 assault guns, was attached to the division. This *Sturmgeschütz* Ausf G was produced by Alkett in 1944, and is fitted with the late type of widened *Ostketten* (east tracks). (Anderson)



Anlage zu 103/43g k
Pz Offz b Chef GenStdH

Anl. 1) zu OKH/Ch H RÜ u BdE
AHA/Is(1) Nr. 1880/43 g. Kdos.
vom 12.4.43

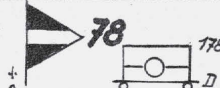
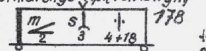
78. Sturm-Division

Nr. 1740/43 g. Kdos. v. 31.2.43

W. Kdo. T

379

Aufklärungs-Grp. (Volkswehrg.)

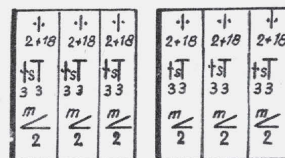
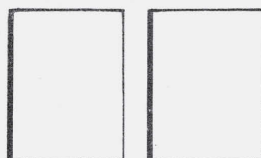
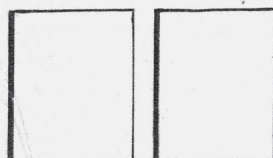
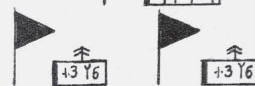
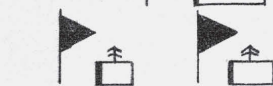


x) je s. F. 1 RSO

215

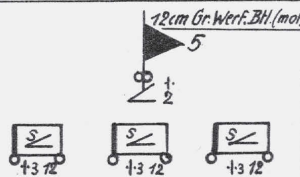
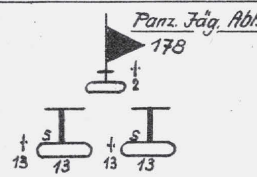
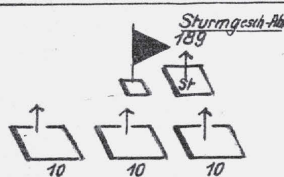
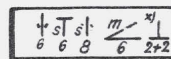
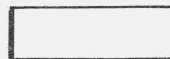
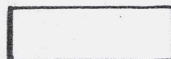
195

Sturm-Rgte



wie vor

wie vor

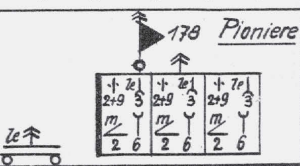
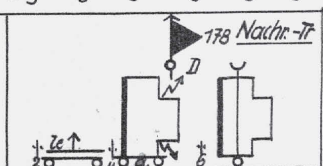
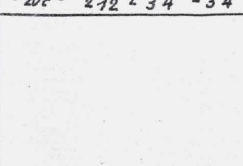
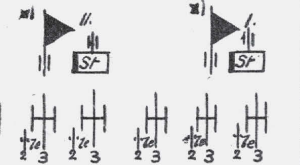
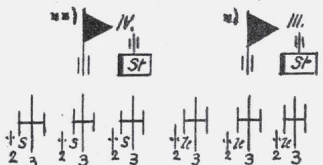
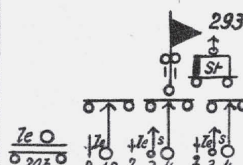


Flak

x) je 1e F.H. Abtl. 18 RSO zusätzlich
x) je s. F.H. Battr. 12 RSO zusätzlich

178

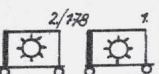
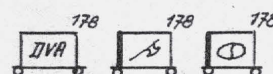
Artillerie



Verwalt.-Tr.

Kf. Park-Tr.

Nachschub-Tr.

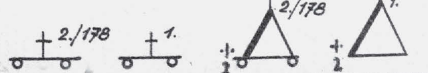


Feldpost

Ordn.-Tr.

Vet.-Tr.

San.-Tr.





However these formations were only a temporary expedient and all were disbanded during 1942.

However, the *Generalstab des Heeres* was aware that winter would remain a problem as long as German troops continued to fight in Russia. At the end of 1943 the decision was made to form a *Sonderverband* (special unit) in brigade strength, which became Skijägerbrigade 1, a unit suited for mobile operations during the snow period of winter.

In a similar fashion to 78.StuDiv, Skijägerbrigade 1 had an assault gun battalion, StuGAbt 270 equipped with 31 StuG. This unit was again integrated with the artillery element; a *leichte Heeres-Artillerie-Abteilung* (light army artillery battalion). For an unknown reason, StuGAbt 270 was later permanently transferred to the *Panzerjägertruppe* and renamed PzJgAbt 152.

In mid-1944, Skijägerbrigade 1 was brought up to full divisional strength, and re-designated as 1.Skijäger-Division. In a strength report, dated 1 December 1944, PzJgAbt 152 reported that it had eight *Sturmgeschütz* and three *Sturmhaubitze* out of an authorized strength of 29 (this reduced number cannot be explained) as operational.

The commander wrote a note of complaint:

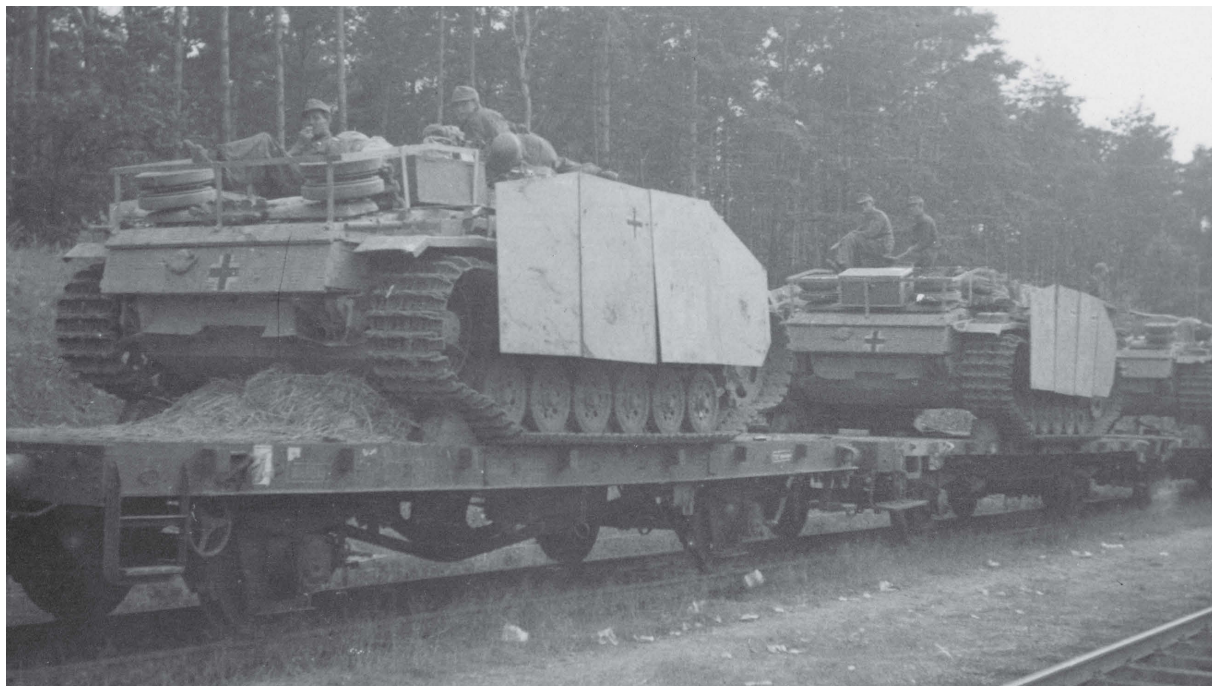
A *Sturmgeschütz* Ausf G of 78.StuDiv can be positively identified as Alkett-manufactured by the pattern of the Zimmerit. Note the vehicle is fitted with a *Saukopf* (pig's head) mantlet and that the gun barrel has been lowered onto its travelling cradle; also work has been completed to fit a *Rundumfeuer-Maschinengewehr*, (all-round fire machine gun), but the gun has not been mounted. (Anderson)

Right:

A MIAG-built (identifiable by the style of Zimmerit application) *Sturmgeschütz*, from 78.StuDiv, during transport to the front. Contrary to regulations the wide tracks overlap the width of the wagons and the *Seitenschurzen* (side skirts) have not been removed. The second vehicle is a *Bergepanzer* III recovery tank. (Anderson)

Below:

A trainload of *Sturmgeschütz*, newly delivered to 78.StuDiv, being transported to the east in early summer 1944: Note they are fitted a factory-made frame around the engine deck to allow the carriage of the crew's personal equipment. All are fitted wide *Ostketten* (east tracks). (Anderson)



**Above:**

A *Sturmgeschütz* Ausf B modified for trials as a *Leitpanzer* (control tank) with remote-controlled *Landungsträger* (demolition charge carrier). The gun has been removed and a 2m rod antenna, for the radio-control transmitter, has been fitted on the roof above the gunner's position. (von Aufsess)

Right:

The crew of this *Sturmgeschütz* Ausf G has attempted to camouflage the vehicle by applying 'squiggles' of light-coloured paint (or clay) over the original dark grey. (Anderson)



Brief judgement by the commander:

Due to the steady commitment in the muddy and mountainous terrain, the battalion has retained only 50 per cent of its combat strength. The spare parts situation at the moment is desperate, especially the lack of final drives and transmissions for the StuG, but also for the Volkswagen [*Kübelwagen*]. All repair work is delayed since spare parts cannot be supplied in time.

My battalion is only suitable for limited attack missions.

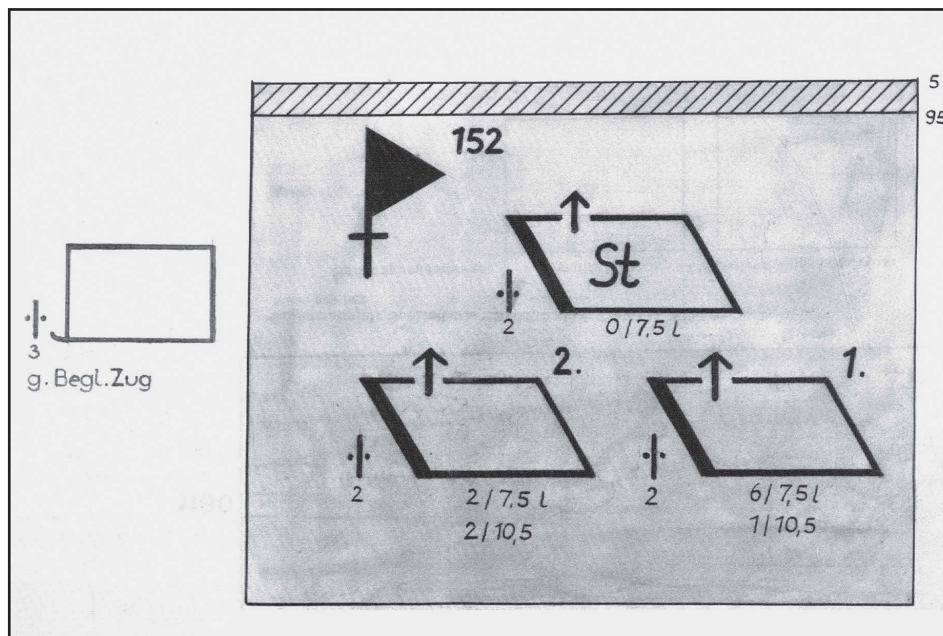
Hauptmann Stock, Battalion Commander

In 1945, PzJgAbt 152 was still attached to 1.Skijäger-Division, but now had only two companies each with ten *Sturmgeschütz*; possibly the result of an internal reorganization. The unit had a *Skijägerbegleitzug* (infantry support platoon) attached.

18.ArtDiv with StuGBttr 741

In September 1943, the *Oberkommando der Wehrmacht* (OKW – army high command) ordered the formation of artillery divisions able to provide support gun fire at points of main effort. According to the order, these measures were issued on the personal instigation of Adolf Hitler.

The unit selected to form the first artillery division was 18.PzDiv. This tank division had been deployed to the Orel salient and had received a severe mauling during the six week deployment. By 1 September, only eight



In 1944, StuGAbt 270, the StuG detachment of 1.Skijäger, was transferred to the *Panzerjägertruppe* (tank destroyer troop), and re-designated PzJgAbt 152. (Anderson)

of 53 PzKpfw IIIs and just four out of 14 PzKpfw IVs were reported as being operational. At that time, the commander referred to his unit as a *Kampfgruppe* (combat group), an indication of actual weak combat strength. The remaining tanks and armoured fighting vehicles were transferred to other units in *Heeresgruppe Mitte*. The personnel and other sections were used to form the new unit: 18.ArtDiv.

Owing to its intended purpose, this experimental unit was initially equipped with three artillery regiments (ArtRgt 782, 109 and 88) each with nine batteries, and ArtRgt 88, which was to have two self-propelled artillery batteries.

A short time later, a re-organization was ordered. Further support units such as an observation battalion and further supply units were added. The self-propelled artillery battalion was increased to one heavy battery equipped with the 15cm *Panzerhaubitze* 18 (tank howitzer) *Hummel* (Bumble Bee) and two light batteries equipped with 10.5cm *Panzerhaubitze* 18 *Wespe* (Wasp); at the time this was a standard establishment.

On 16 September 1943, two independent assault gun batteries (StuGBttr 741 and 742) were ordered to transfer from 20.Gebirgs-Armee (mountain army) in Norway to the Eastern Front. On 29 September 1943, StuGBttr 741 was ordered to be incorporated with 18.ArtDiv.

Two *Sturmgeschütz* Ausf F *Leitpanzer* (control tanks) of *Panzer Versuchs und Ausbildungsteilung* 300, (PzVersundAsbAbt – tank experimental and training battalion) located at Eisenach in 1944. Both are fitted with the longer-barrelled 7.5cm StuK 40 L/48. (Anderson)

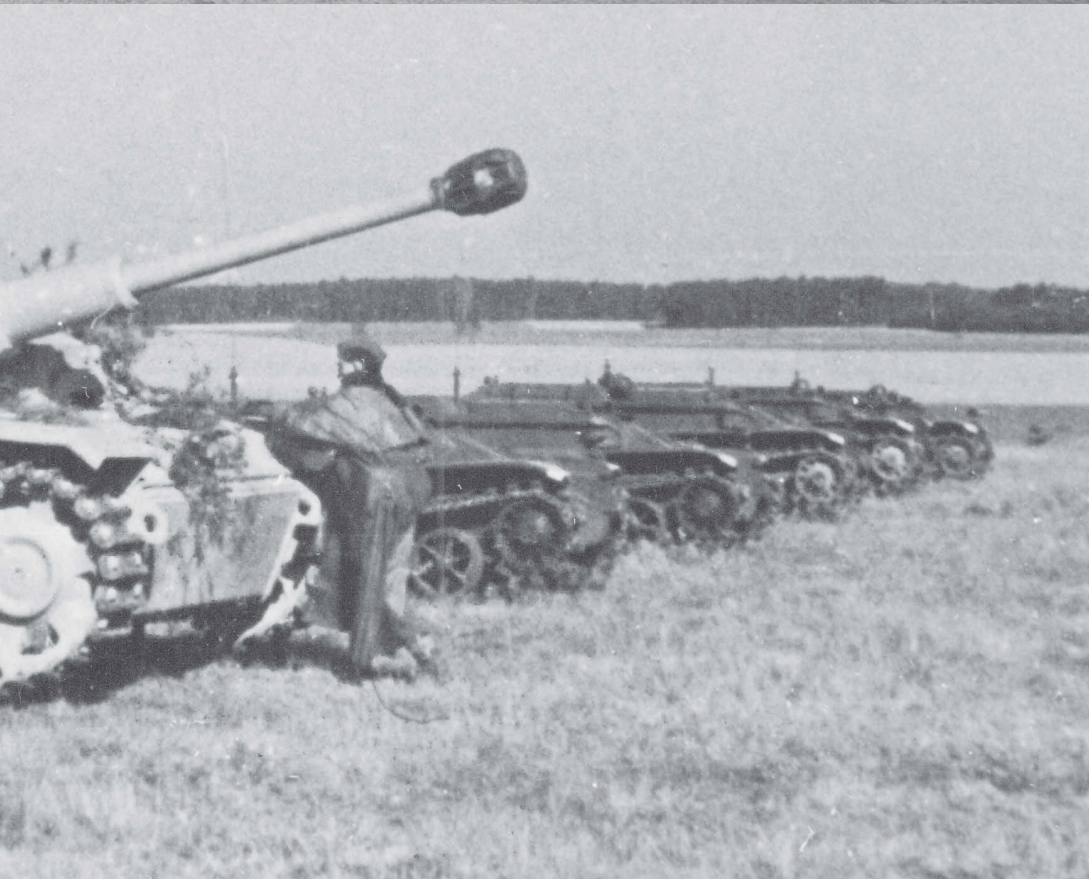


A *Sturmgeschütz* Ausf G *Leitpanzer* (control tank) and a number of Borgward B IV *Landungsträger* (demolition charge carrier) from PzKp (Fkl) 314, at the Berka, Thuringia, Germany exercise area in 1943, when preparing for their forthcoming deployment to Kursk. (Anderson)



The remote-controlled *Landungsträger* (demolition charge carrier) was developed to clear minefields or obstacles. The Borgward B IVb was designed to carry a 500kg explosive charge, and directed to the target via radio control; a driver operated the vehicle up until it was deployed against a target. The marking PV refers to *Panzer Versuchs und Ausbildungsabteilung* (PzVerundAusbAbt – tank experimental and training battalion) 300, and the vehicle is numbered 394. (Hoppe)





In April 1944, a new organizational structure showing many alterations was introduced. The reason was possibly to improve self-defence capabilities. ArtAbt 88 was changed to a *Schützenabteilung (mot)* 88 (motorized rifle battalion). The self-propelled artillery battalion, now enlarged to three heavy batteries equipped with the *Hummel*, was incorporated alongside the remaining artillery regiments. The assault gun element was now to be replaced by an entire StuGAbt with 31 StuGs. However, it is questionable whether this further reorganization ever happened, since 18.ArtDiv was disbanded in July 1944.

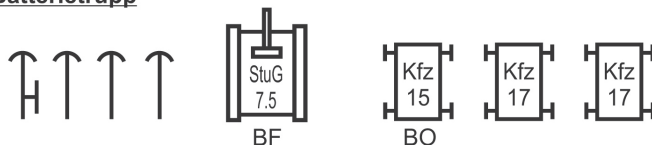
PzDiv Norwegen with StuGBttr 742

PzDiv Norwegen (Norwegian) was established near Oslo in August 1943. The unit relied on a small team of officers and NCOs seconded from 25.PzDiv, which at that time had been transferred to Norway from France for refitting. However, PzDiv Norwegen was never established as a full Panzer division; for instance, the unit only ever had a small number of outdated PzKpfw III tanks supported by the independent StuGBttr 742. But in September 1943, the battery was detached and deployed with StuGBttr 741 to the Eastern Front. This order was cancelled, StuGBttr 742 was sent to Altengrabow to be disbanded, and its equipment distributed for establishment of new StuG units.

Sturmgeschützatterie (10 StuGs)

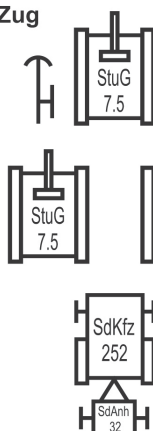
Table of organization according to KStN 446 dated 1 November 1941.
Equipment state as an independent battery in mid 1943.

Batterietrupp

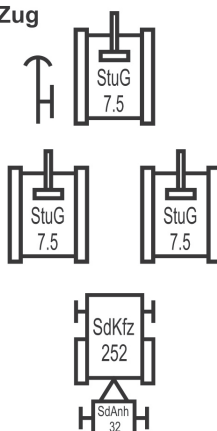


Gefechtsstaffel

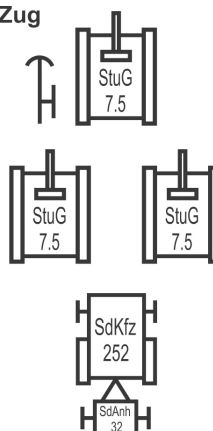
1. Zug



2. Zug



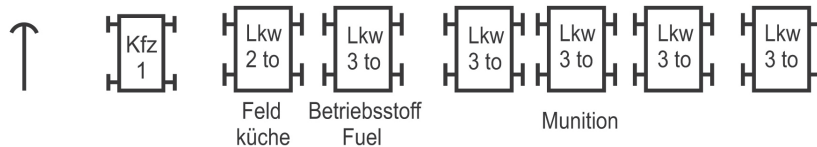
3. Zug



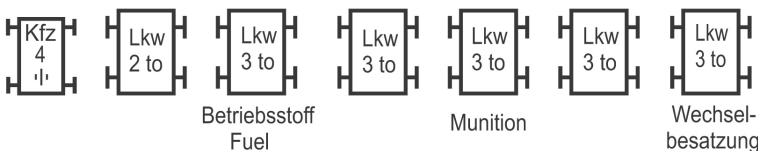
Kfz.-Inst.-Trupp



Tross I



Tross II



Gepäck-Tross





By May 1944 the PzDiv Norwegen reported one PzBefWg I command tank, 14 PzKpfw II, 20 PzKpfw III (7.5cm [kurz]) and 25 PzKpfw III (5cm [lang]) in its inventory. For the division's PzJgAbt, a new PzJg-StuGAbt with 10 StuG (lang) was issued (see respective chapter).

In July 1944, PzDiv Norwegen was disbanded and some of its equipment was used to re-establish 25.PzDiv, which had been annihilated in February 1944.

Independent batteries were organized according the current organizational standards, and were often attached to other units (infantry divisions) which lacked an armoured component and associated heavy workshop and recovery services. In a StuGAbt, these services were normally provided by the *Stabsbatterie* (staff battery), or by single *Werkstattbatterie* (workshop battery).

For the small detachments in battery strength, the minimum of specialist equipment had to be allotted. The respective KStN shows a small alternative section, proving that there was a surplus. However, deliveries of the *schwere Zugkraftwagen* (s ZgKw) 18t (SdKfz 9), heavy tractor needed for the recovery of a failed *Sturmgeschütz* was not always guaranteed.

A *Sturmgeschütz* Ausf G, built on the chassis of a PzKpfw III, in service with PzVersundAusbAbt 300 as a control tank. As the war progressed, the supply of fuel became desperate and vehicles at training establishments began to be run on gas: Note the cylinders mounted on the engine deck. (Hoppe)





A *Sturmgeschütz* from StuGAbt 279, which was attached to Skijäger-Brigade 1, has broken through the ice over a frozen river despite being fitted with wider *Winterketten* (winter tracks), which were intended to reduce ground pressure. The vehicle has additional air filters, which were normally fitted on vehicles operating in hot and dry conditions (Anderson)

Funklenkeinheiten **(Radio-Controlled Demolition Carrier Units)**

During World War II, tank formations faced many menaces; an enemy would protect his front line with infantry in an elaborate system of trenches supported by machine-gun nests and protected by concealed anti-tank guns. While the advancing tanks, or *Sturmgeschütz* supporting their infantry, could eventually make a breakthrough, there were more dangerous obstacles. If the enemy had sufficient time, he would protect his positions by laying a staggered system of minefields invisible to attacking armour, where a tank could be immobilized and become an easy target for the enemy anti-tank forces: A simple method of defence which could even halt a massed tank attack.



Germany developed an unconventional solution to combat the mine threat, which began with the simple expedient of dropping an explosive charge from a specially modified tank to the development of small remote-controlled tracked vehicles. Directed to the target from a control vehicle, the carrier would be signalled to drop the charge and return, or the carrier could be detonated to destroy the obstacle.

The first *Funklenk* units were established in 1940, but it would not be until 1942 when the type was deployed on a large scale.

Initially the PzKpfw III was used as a *Leitpanzer* (control tank) to direct the carrier to a target. With the slow withdrawal of the PzKpfw III from tank divisions, the *Funklenktruppe* was in need of a replacement *Leitpanzer*. Instead of using the current version of the PzKpfw IV, it was decided to

Vehicles of PzKp (Fkl) 314 in training shortly before being deployed to fight on the Kursk salient; in the background is a PzKpfw IV Ausf G armed with a 7.5cm KwK 40 L/43 and fitted with *Seitenschürzen* (side skirts). (Historyfacts)





use the *Sturmgeschütz*, now being produced in sufficient numbers. The low profile and heavier armour of the StuG could possibly have influenced the choice.

The Fkl companies had an authorized strength of 10 *Sturmgeschütz* as *Leitpanzer*, and 48 Borgward B IV *Landungsträger* (demolition charge carrier). The companies could be deployed as a semi-autonomous force or attached to other units, or combined as a FklAbt with three companies.



In August 1944, PzAbt (Fkl) 302 was transferred to Poland to assist German forces fighting to put down the Warsaw uprising. The explosive charge carried by a Borgward B IV was powerful enough to demolish a very large building. During street fighting, the control tanks would use gunfire to support advancing infantry. (Getty)

In May 1943, three independent PzKp (Fkl) were dispatched to the Kursk salient in preparation for the forthcoming attack; PzKp (Fkl) 313 and PzKp (Fkl) 314 were to support an attack by PzJgRgt 656 equipped with the Ferdinand (SdKfz 184s). PzKp (Fkl) 312 was attached to s PzAbt 505 equipped with the PzKpfw VI Tiger. The deployment at Kursk was to show the limitations of the B IV. The terrain, rutted by heavy artillery bombardment and intersected by trench systems, prevented the vehicles getting to their targets.

On 4 November 1943, the bureau of the *Generalinspekteur der Panzertruppen* issued the requirements for one FklAbt in battalion strength, and seven independent FklKp:

FklAbt 301	31 StuG
FklKp 311, 312, 313, 314, 315, 315 and 317	70 StuG

After the deployment to Kursk, all Fkl units were returned to Germany to be re-established. PzKp (Fkl) 313 and 314 were now attached to PzKpfw VI Tiger units (a PzAbt 504 and s PzAbt 508 as a number of the heavy tanks were converted to *Leitpanzer*).

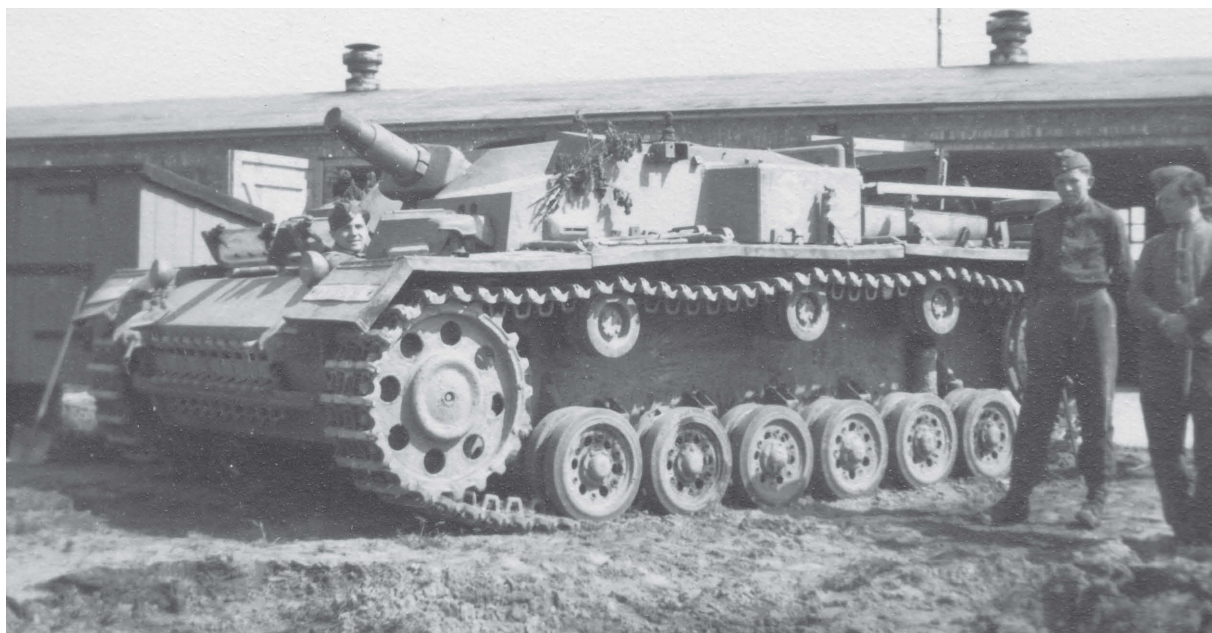
At the end of February 1944, PzAbt 301 (Fkl) was sent to Nettuno, Italy as part of the force to stop Allied forces attempting to breakout from their Anzio bridgehead. But again the terrain created an obstacle; the numerous canals, waterways and marshes in the area impeded a successful deployment for the B IV. In April 1944, the unit was sent to France to re-equip.

After the D-Day landings on 6 June 1944, PzKp (Fkl) 315 and PzKp (Fkl) 316 and also 4.Kp/PzAbt (Fkl) 301 were deployed against Allied forces advancing into France.

In July 1944, PzAbt 302 (Fkl) was established by amalgamating PzKp (Fkl) 315, PzKp (Fkl) 316 and PzKp (Fkl) 317. In August, PzAbt 302 (Fkl) was ordered to Warsaw, as support for German forces fighting Polish partisans.

On 4 December 1944, the commander of PzKp (Fkl) 319 submitted a status report, noting that three out of ten StuGs, and 32 out of 36 B IVs as being operational. He added his judgement:

A *Sturmgeschütz* Ausf D, possibly it has been converted from a control tank at *Ersatz und Ausbildungsabteilung* (ErsundAusbAbt – replacement and training battalion) 500. Note the mounting for a 2m radio antenna on the superstructure and the sloped armour plate in front of the pannier has been removed, but the brackets are still visible. (Anderson)





Combat value and application possibilities:

Deployment of the B IV was not possible. PzAbt (Fkl) was used as a StuGKp for defence.

PzAbt (Fkl) 303 had a short service life. Established as an Fkl unit in January 1945, it was soon downgraded to a PzAbt and equipped with *Sturmgeschütz*; a fate that was befall all Fkl units.

The Borgward B IV *Landungsträger* was designed as a purely offensive weapon and was almost impossible to use for a defensive operation. On a rare occasion beleaguered German troops would deploy a *Landungsträger* to cover a retreat: the massive explosion and resulting shockwave would be devastating.

The utilization of the demolition carrier can hardly be described as being successful: Technical failures with the radio-control equipment was a constant problem, and heavy mud restricted the type's mobility. The B IV despite having a very limited field of application still had to be transported to a target, squandering precious fuel and personnel resources.

More detail of these units, their equipment and deployment is available in my earlier book: *Ferdinand & Elephant: Tank Destroyer* (Osprey 2016)

A wrecked Borgward B IV *Landungsträger* (demolition charge carrier) of PzAbt (Fkl) 302 lies abandoned in the debris of Warsaw. The uprising was defeated by German forces in October 1944, but despite having reached positions near the Polish capital, the Soviets were not able (or interested) in supporting the Polish fighters. (Anderson)

Two *Sturmgeschütz* control tanks of PzAbt (Fkl) 302 protect each other as *Landungsträger* (demolition charge carriers) are radio-controlled towards their targets. (Getty)







Infantry Formations 5

In 1943, tank production in Germany was, for numerous reasons, forced to diversify. Production of the outdated PzKpfw III had almost ended by January 1943 (only a few vehicles were due for delivery in the summer), and it was replaced by the PzKpfw IV Ausf H armed with the long-barrelled 7.5cm KwK L/48; the same gun as mounted in the *Sturmgeschütz* Ausf F and able to defeat any contemporary enemy tank. At the same time, prototypes of the new PzKpfw V Panther medium tank were undergoing trials, and these should soon be in production, and were intended to replace the PzKpfw IV.

This transition to the PzKpfw IV proved to be difficult as those companies manufacturing the PzKpfw III could not easily be changed over to the PzKpfw IV production. To ensure a steady supply of tanks, *Sturmgeschütz* planners decided to streamline production in an attempt to improve efficiency:

Alkett was ordered to increase production of the StuG.

Mühlenbau und Industrie AG (MIAG) was ordered to begin production of the StuG in March 1943.

MAN and Daimler-Benz was to produce the new PzKpfw V Panther medium tank.

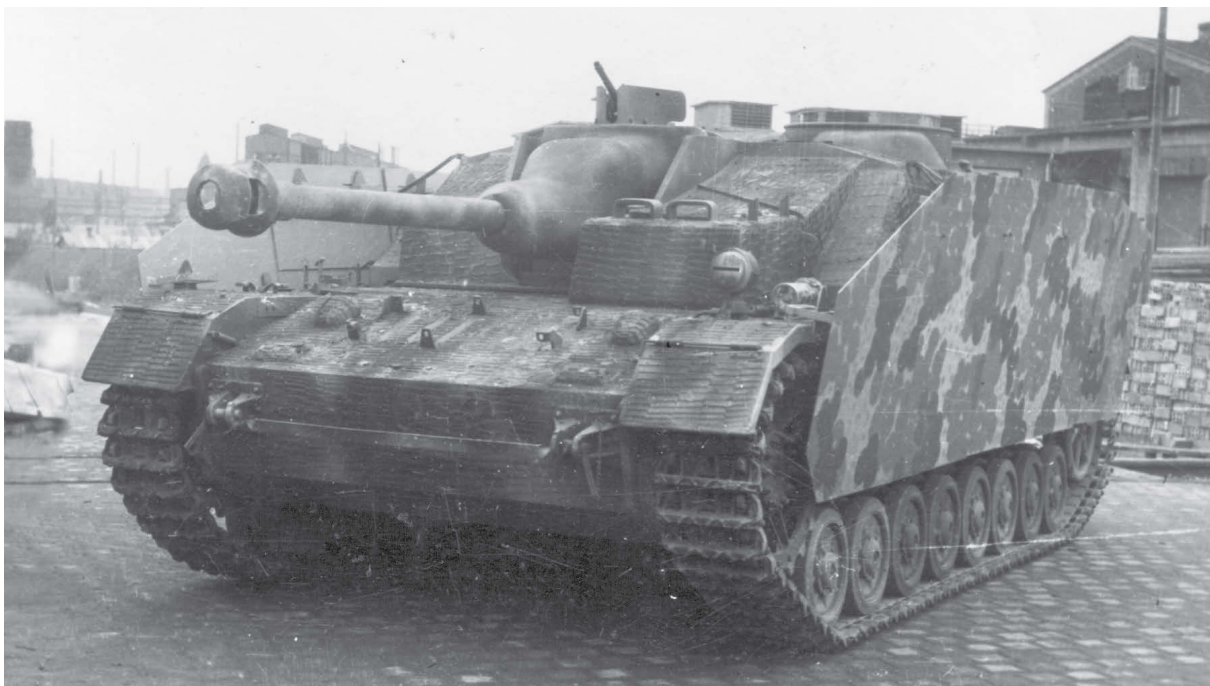
Henschel, having designed and developed the PzKpfw VI Tiger heavy tank, was to concentrate on manufacturing the type.

Maschinenfabrik-Niedersachsen-Hannover (MNH) were to begin production of the PzKpfw V Panther in February 1943.

Unfortunately such sweeping changes required time. Consequently, tank production could not be increased quickly enough to fulfill the demands of the *Panzertruppe*. It proved to be impossible to replace the enormous losses on the Eastern Front at the same time to provide tanks for re-establishments and new formations.

German industrial output, particularly in the armaments sector, was being severely affected by strategic bombing by the RAF (night) and the USAF (day).

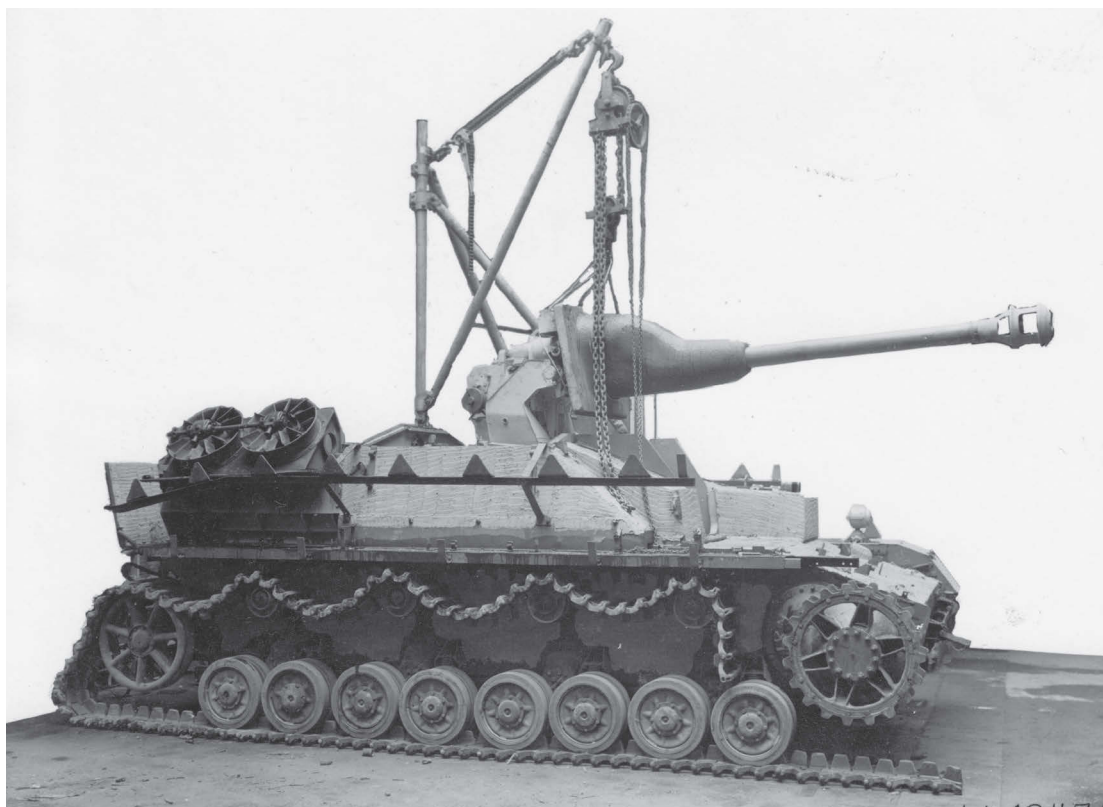
Generaloberst Heinz Guderian, standing in a *mittlerer Schützenpanzerwagen* (medium half-track armoured carrier) SdKfz 251/3 *Funkwagen* (radio car) issuing orders to his *Kampftruppen* (combat units) to be transmitted by the two operators: one uses radio equipment while the other encodes the message using an Enigma machine. (Getty)

**Above:**

The *Sturmgeschütz* IV entered production in early 1944, after the Alkett factory had been destroyed by an Allied bombing raid which halted production. Basically the *Sturmgeschütz* IV was built by adapting the superstructure of the *Sturmgeschütz* III and fitting it on a PzKpfw IV hull, but with a small armoured extension for the driver due to the longer fighting compartment in the PzKpfw IV. (Historyfacts)

Right:

Due to the lack of specialized crane trucks, a 2-ton capacity *Behelfskran* (auxiliary crane) was designed. The simple device could be used to replace the engine or gun. However, the standard production *Behelfskran* was mounted on top of the vehicle, making it impossible to lift the gun. (Historyfacts)





The campaign to destroy industrial capacity was also intended to have a demoralizing effect on the German population, many of whom worked in the factories.

The effect of the bombing on German industry must not be overestimated. From September 1940 to August 1943, the raids were carried out without any regularity (or accuracy) and in general output was not affected. However, when the bombing changed to day and night attacks and increased in frequency during September 1943, the effect on industry became noticeable, but the Germans proved able to increase the monthly tank production figures. As the destruction continued it began to affect vital parts of the German economy, such as steel and petro-chemical production supply became more difficult as significant parts of the railway network was destroyed.

It must be remembered that the *Sturmgeschütz* was at that time an important, if not vital, part of the German war machine due mainly to the type's undisputed combat success on the Eastern Front. On the other hand, assault guns formed a large part of the German armoured force's inventory; the number would continue to increase.

Sturmgeschütz IV

In February 1943, Krupp-Grusonwerk, one of the main contractors for the production of the PzKpfw IV, presented plans to mount a slightly modified superstructure from a StuG Ausf A on the chassis of the PzKpfw IV. The reason for their decision is unknown, and is made even more puzzling with

A Sturmgeschütz IV with a Zimmerit coating identifies it as being from a mid-1944 production batch. The vehicle is fitted with the versatile Rundumfeuer-Maschinengewehr (all-round fire machine gun). Two Flammenvernichter (flame suppressor) pipes have been fitted in place of the standard exhaust. (Historyfacts)



Tank engines had a limited service life and had to be exchanged on a regular basis. Engineers from a workshop company have assembled an auxiliary crane to lift the Maybach engine from a damaged *Sturmgeschütz*. (Anderson)

the knowledge that the development of an improved *Sturmgeschütz* had already begun at Vogtländische Maschinenfabrik AG (VOMAG), leading to the *leichte Panzerjäger* (PzJg) IV.

In September 1943, the Alkett factory was seriously damaged in an Allied bombing raid which resulted in a considerable drop in output of the *Sturmgeschütz*, at a time when every single tank was needed. Due to the situation the original plan to use the BW-chassis (BW was the in-plant designation for the PzKpfw IV) for the *Sturmgeschütz* was resurrected.

A letter sent by Krupp-Grusonwerk, dated 11 December 1943 states:

At this time, the Alkett facility at Berlin-Borsigwalde is unable to continue production of *Sturmgeschütz* on the ZW chassis [ZW – PzKpfw III]. At the instigation of MunMin [Reichminister Speer], the ZW-*Sturmgeschütz* will be built on a BW chassis as an interim solution.

It must be mentioned that a BW-*Panzerjäger* with 7.5cm KwK L/48 will soon be produced by VOMAG in large numbers.

In the next days both BW-*Panzerjäger* (VOMAG and Daimler-Benz) will be displayed in the *Führerhauptquartier* [Hitler's headquarters].

This letter underlines the absolute necessity of using all available production sites to produce tanks. In late 1943, the new le PzJg IV had completed



development trials, and instead of concentrating production on this type a further vehicle, the StuG IV, was also ordered into production. Realizing the situation, Krupp referred their StuG IV as a *Panzerjäger*. It is obvious that Hitler was fully aware of this as the development was the subject of a presentation to him on 6 December 1943:

The Führer appreciates the suggestion of using elements of the StuG III superstructure for a similar solution based on the PzKpfw IV. This proposal gives the chance of supplying these vehicles to the tank battalions, and standardizing the spare parts situation.

In this context it is interesting to note that Hitler agreed with proponents of the *Sturmgeschütz*.

A report to Hitler from August 1943 reads:

Reports from the front passed to the Führer underline the extraordinary merits of the *Sturmgeschütz*, which have proven their superiority to the PzKpfw IV, in many cases under equal combat conditions. Therefore all efforts must be made to set up the conversion of PzKpfw IV production, without affecting overall output, even if the new *Panzerjäger* IV proved its combat ability.

This *Sturmgeschütz*, without armament, has been fitted with a dozer blade and was possibly used to clear roads of debris left after Allied bombing raids. Front line use of the un-armed vehicle seems to be highly unlikely. Also the extra weight of the blade and clearing operations could overload the mechanically vulnerable drivetrain. (NARA)





Two *Sturmgeschütz* IVs and one *Sturmgeschütz* III loaded for rail transport. The first two vehicles are *Befehls-Sturmgeschütz* (command tanks); note both have an additional *Sternantenne* 'd' (star antenna 'd') for the extra radio equipment. (Anderson)



The crew of this *Sturmgeschütz* IV has painted eyes and nostrils on the *Saukopf* (pig's head) mantlet, and also reinforced the front of the superstructure with a thick layer of concrete and sections of track. The vehicle is fitted with wider *Ostketten* (east tracks). (Anderson)

These lines proved the immense value of *Sturmgeschütz* on the Eastern Front. However, the proposed successor was intended to replace the PzKpfw IV in production entirely. While the *General der Artillerie* certainly would have agreed, Guderian as *Generalinspekteur der Panzertruppe* heavily opposed the plan, demanding continuation of the production of the PzKpfw IV. The argument continued for nearly a year, without being resolved. In June 1944, during a conference with the Führer, Guderian again presented his opinion:

Presentation to the Führer on 26 June 1944

Conversion of PzKpfw IV production to *Sturmgeschütz* L/48 and the L/70.

- 1) Within a tank regiment the experiences gathered from all available troops confirms that the tank with a rotatable turret is clearly preferred to the assault gun. No contrary message is known.
- 2) All previous types of enemy tanks and assault guns can be effectively combated with our present armour-piercing weapons, including the 7.5cm KwK L/48.
- 3) A conversion of PzKpfw IV production to *Sturmgeschütz* would imply that all future replacements for PzKpfw IV battalions would consist of *Sturmgeschütz*. This would result in having two types of tanks with entirely different principles of deployment within the PzKpfw IV battalions. The *Generalinspekteur* suggests the continuation of PzKpfw IV production, which at this time is hardly sufficient to balance the losses by units in the field,

until the Panther output is also sufficient to provide a second battalion in a regiment with the Panther. The final aim must be to raise Panther production to 900 units a month. Furthermore, we suggest provision of the 1e PzJg IV by mounting the 7.5cm KwK 42 L/70 beginning in August, and to mount all PzJg III/IV *Einheitsfahrzeugstell* [universal chassis] with the 7.5cm PaK 42 L/70 beginning in November.

Signed: Guderian

Subsequent to this presentation to the Führer, a final decision was made:

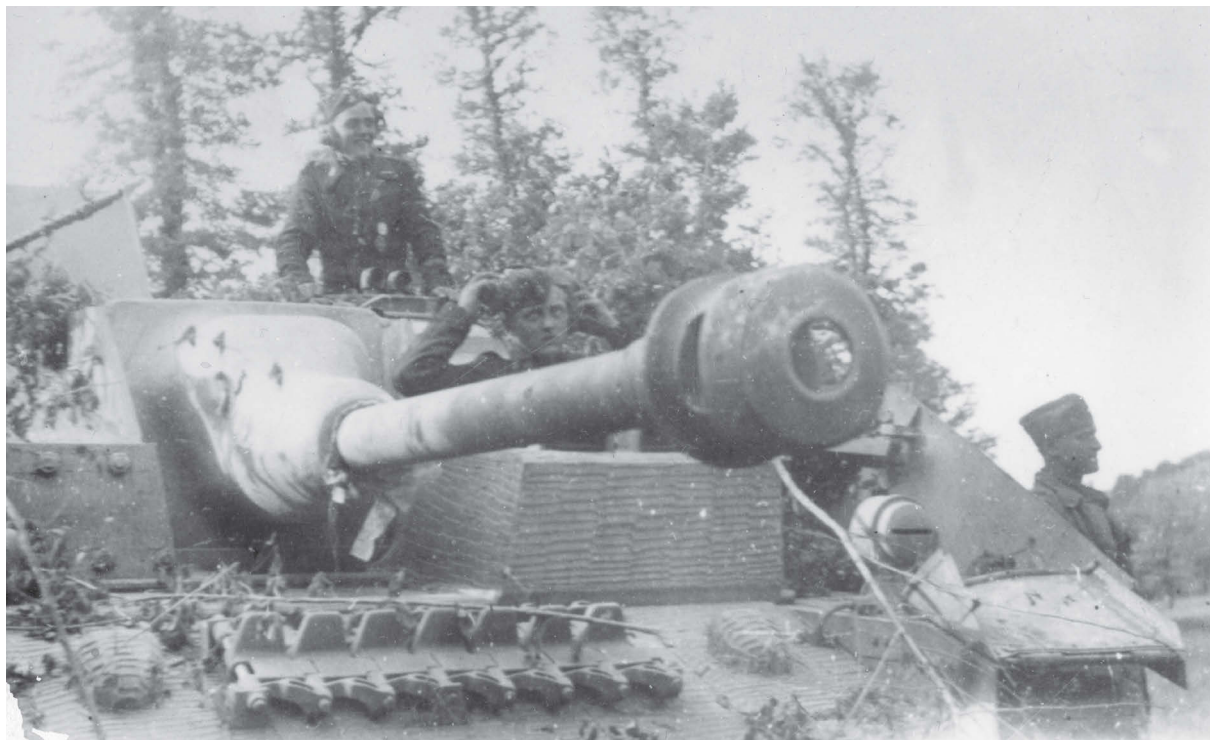
As for the question of transferring all PzKpfw IV production to *Sturmgeschütz*, the Führer has decided according the proposals made by *Generaloberst* Guderian and Herr Saur as follows:

Production of the PzKpfw IV will continue with 300 units per month, plus *Flakpanzer*, until further notice. All tanks exceeding this number will be immediately used for the trials of the 7.5cm KwK 42 L/70 in turretless vehicles.

Infantry Divisions

In the period after the loss of Stalingrad, the demand for *Sturmgeschütz* continued to increase. Proven to be able to defeat the Soviet T-34 and

A standard production *Sturmgeschütz* IV finished with a manufacturer-applied coat of Zimmerit. Although the unit cannot be identified, the Romanian soldier standing at the right suggests that it was part of *Heeresgruppe Süd* (Army Group South). (Anderson)



**Above:**

A *Sturmgeschütz* IV has a full set of undamaged *Seitenschürzen* (side skirts), despite having been in action on the front line. The crew is wearing the standard grey artillery-style tank uniforms and their badges suggest that they are in a Waffen-SS unit. (Anderson)

Right:

A *Sturmgeschütz* IV from a *Luftwaffe* infantry unit has had the 80mm frontal armour reinforced by welded-on thick armour plates. Extra armour has also been added to the front of the positions for the driver and radio operator. (Anderson)





KV tanks, plans were now made to equip the infantry divisions with an assault gun element, ultimately strengthening the divisional PzJgAbt. The discussion continued until it was decided the prime task for *Sturmgeschütz* within infantry divisions would primarily be as a tank destroyer, and not in the original role as an assault offensive weapon.

In October 1943, several meetings were held at the *Organisationsabteilung* (OrgAbt) and a decision was made to equip the majority of infantry divisions with assault guns, as follows:

Subject:

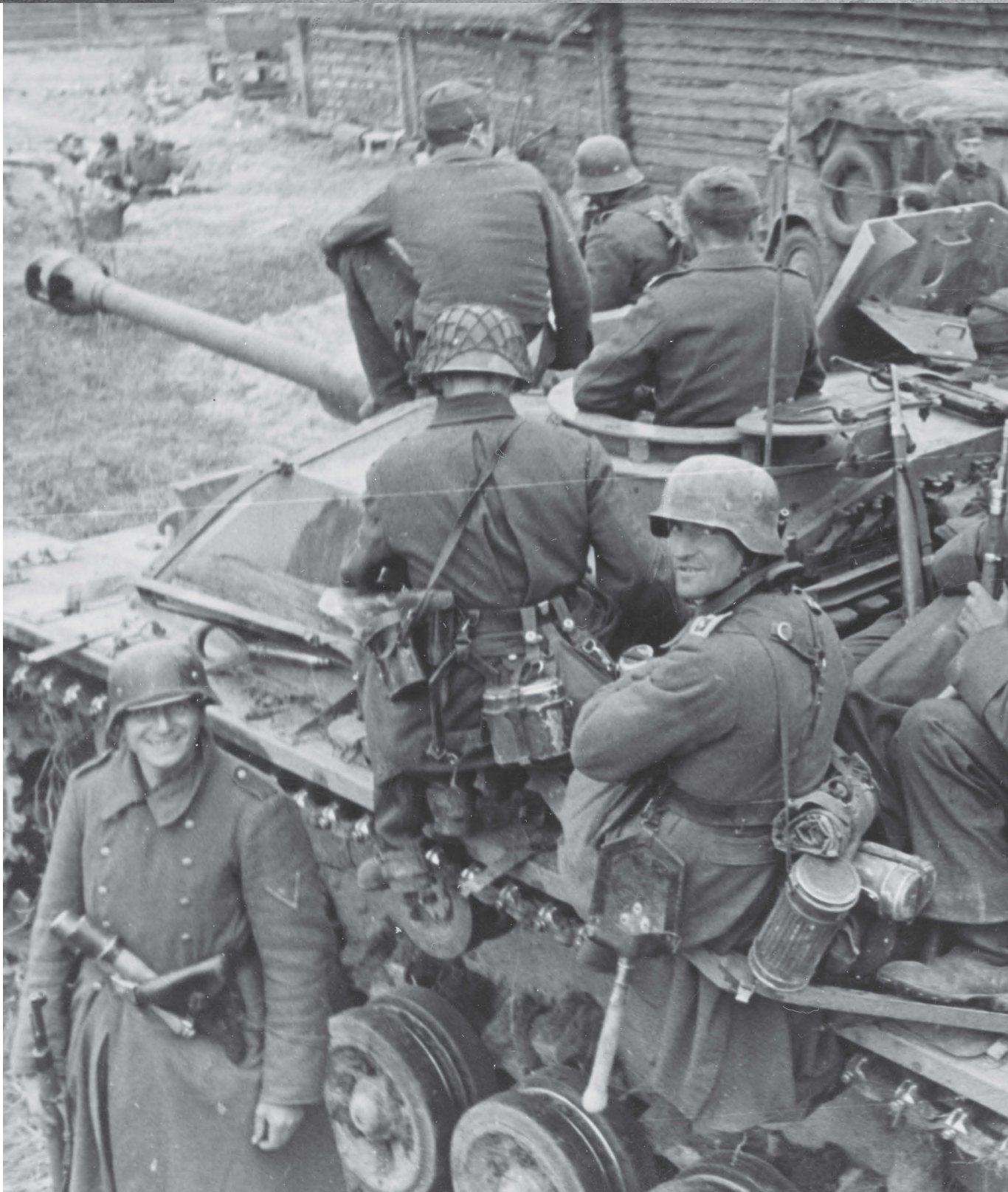
Establishment of further *Sturmgeschütz* units

Amalgamation of the *Sturmgeschütz* and *Panzerjäger* services

- 1) The *Sturmgeschütz* was originally introduced as an infantry support weapon.
- 2) Experience would show that the *Sturmgeschütz* proved to be able to effectively fight enemy tanks
- 3) The service *Panzerjäger* (tank destroyer), which started with the 3.7cm PaK, evolved into using the *Sturmgeschütz*.
- 4) Ideal situation
 - a) One StuGAbt in each division
 - b) *Heeres* StuGAbt for creation of points of main effort

Due to the production situation, this ideal is not feasible.

The crew of this *Sturmgeschütz* IV from an unidentified unit has attempted to improve the armour protection on their vehicle. A short length of *Ostketten* (east tracks) has been welded to the front of the driver's position and covered with a thick metal plate. Parts of the superstructure has been rounded off with a smooth coating of concrete. (Anderson)





A *Sturmgeschütz* carries a grenadier unit to its next assignment. Mobility was a continuous problem for supporting infantry units, as sufficient numbers of *Schützenpanzerwagen* (armoured half-track carriers) were not always available. Assault guns crews greatly appreciated the infantry as they provided effective protection during an advance. (Anderson)



A damaged *Sturmgeschütz* IV being recovered by a *schwere Zugkraftwagen* (s ZgKw) 18t (SdKfz 9): The markings on the halftrack indicate that it is from *Panzer-Bergekompanie* (tank recovery company) 4. To the left a *Bergepanzer* (recovery tank) III. (Anderson)

5) Alternative situation

a) One StuGBtrr (company) in division	220 Batteries
b) StuG-Abt as army troops	312 Batteries

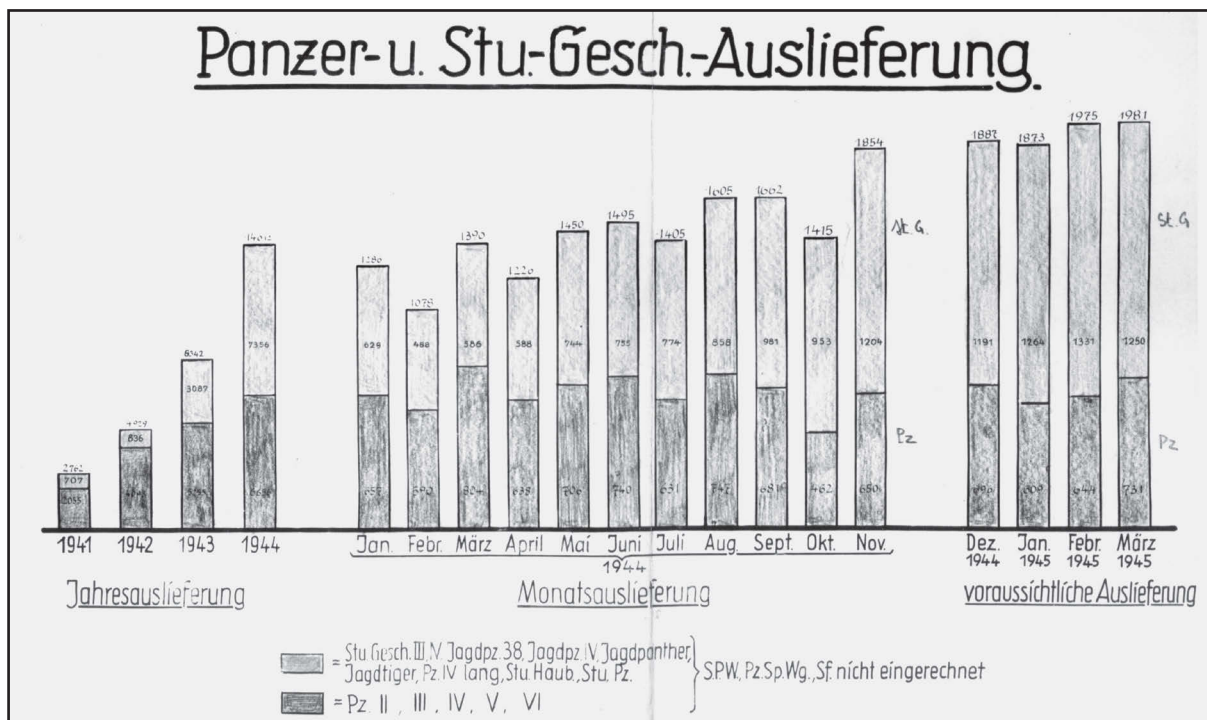
	532 Batteries

It is impossible to realize both alternatives (5a and 5b) at the same time. With the present *Sturmgeschütz* situation only one alternative is practicable. An increase in StuG production to fulfill the needs of both *Heerestruppen* units and those of the infantry divisions and also to maintain them... is impossible. To realize the above would require the production of 13,150 *Sturmgeschütz* within a 15 month period; a monthly production of 875 units.

The OrgAbt was completely aware of the desperate production situation. In mid-1943, the *Waffenamt* (ordnance bureau) reported monthly delivery figures of 167 *Sturmgeschütz* and *Sturmhaubitze* (StuH – assault howitzer); just 20 per cent of the figure indicated under item 5). It was hoped that monthly production would peak at some 500 vehicles by December 1944.

The realities are clearly detailed in a report on the production of tanks and *Sturmgeschütz*, published by the OrgAbt in December 1944. The related table *Panzer und Sturmgeschütz Auslieferung* (Delivery of Tanks and Assault Guns) compared the total annual production figures for 1941 to 1943, and the monthly numbers for 1944 (January to November), plus the planned number for December and for 1945.

From late 1943, the term *Sturmgeschütz* was not only applied to the earlier SdKfz 142 (another official designation for the StuG III), but also for



later vehicles; the StuG IV, *Sturmpanzer* (assault tank), the PzJg IV, Pz IV/70, PzJg 38(t) also the *Jagdpanther* and *Jagdtiger*. Indeed, production figures for *Sturmgeschütz*/*Panzerjäger* clearly exceeded those for tanks.

The report does underline the fact that the distribution of tasks between *Sturmgeschütz* and *Jagdpanzer*/*Panzerjäger* over the years 1943/44 was diminishing. For German forces, the war had changed: an assault led by massed tank formations was a thing of the past. Due to the desperate situation on all battlefronts, especially in the east, all armoured forces had to be utilized for the defence of infantry divisions against emerging masses of enemy tanks.

Although the accumulated numbers in the table do not allow a specified view of the 'original' *Sturmgeschütz* (Ausf G, 7.5cm StuK 40 L/43 [SdKfz 142/1], including 10.5cm StuH 42 L/28.3 [SdKfz 142/2]) production, it becomes apparent that the table was compiled by other sources.

The combined yearly tank and *Sturmgeschütz* production figures for 1941 to 1943, the monthly production figures 1944, and the proposed production for December 1944 to March 1945.

Production of StuG, PzKpfw IV and Panther

	SdKfz 142/1	SdKfz 142/2	StuG IV	PzKpfw IV	Panther
1943	3,011	204	—	2,938	1,768
1944	3,840	903	1,006	3,125	3,777
1945	863	192	105	365	439

The table clearly shows the numerical importance of the 'original' *Sturmgeschütz*.



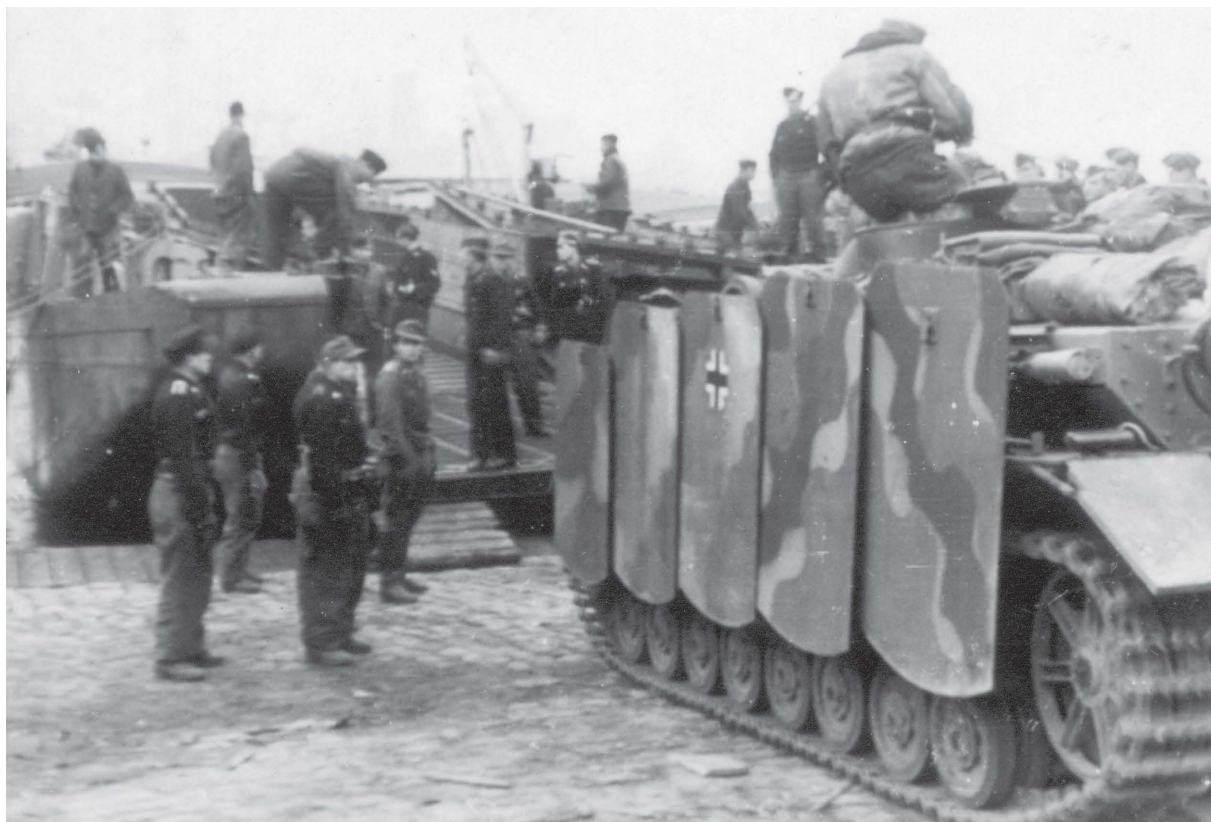
A *Sturmgeschütz IV* in service with *Heeresgruppe Nord* (Army Group North) has been immobilized and abandoned in an unknown town during winter 1944. (Anderson)

Organizational Changes to the Infantry Divisions

With adoption of new organizational structures for the *Infanterie-Divisionen* (InfDiv – infantry divisions), the *Jäger-Divisionen* (JgDiv – light infantry divisions) and *Gebirgsjäger-Divisionen* (GebJgDiv – light-infantry mountain divisions), finally an armoured component [*Sturmgeschütz*] was introduced.

At the beginning of the war, initial ideas saw the integration of an entire StuGAbt per division. However, this was not feasible, and instead the formation of smaller StuG detachments was discussed. The new October 1942 '*Infanterie-Division neuer Art*' (infantry division; new style) had, among other changes, a reformed PzJgAbt. This battalion-size subunit had one *Panzerjäger-Kompanie* (PzJgKp – tank destroyer company) with 12 *schwere Panzerabwehrkanone* (s PaK – heavy anti-tank guns), equipped with either the 7.5cm PaK 50, 7.5cm PaK 98/38 or 7.62cm PaK 36(r), and one FlaK company as well as one PzJgKp with 14 s PaK (Sfl) with 7.5cm self-propelled guns. Alternatively, the new structure authorized an establishment with *Sturmgeschütz*, depending on availability.

The basis for establishing a StuG or PzJgKp in a PzJgAbt *mot Zug* (motorized platoon) was organizational table KStN 1159 Ausf B dated 20 June 1943, [see [Chapter 3](#)]. In contrast to this earlier version (now referred



to as Ausf A), a unit would be equipped with 14 *Sturmgeschütz*, and a full establishment of support elements including workshop and recovery services. This was deemed necessary, since the infantry divisions did not have the facilities to maintain heavy equipment.

A tank destroyer subunit, still in company strength was now organized according the new KStN 1149 (StuG Abt [10 or 14 StuG in PzJgAbt]) dated 1 February 1944. At least on paper the company had been raised to battalion strength – the reason for this is not known – despite actually remaining a company. For 1944-style division, this organizational structure allowed an establishment of 10 or 14 *Sturmgeschütz*. At this time a unit could be equipped with *Sturmgeschütz*, the *leichte Panzerjäger* (le PzJg – light tank hunter/destroyer) IV or the le PzJg 38(t) *Hetzer* – [Baiter].

As noted in a table published in January 1944 by the GenStbdH, the majority of those InfDiv, PzJgDiv and GebrigDiv issued with *Sturmgeschütz* (34 divisions) would ideally have 14 assault guns in their inventory.

Apparently this authorized strength was reduced in the second half of 1944 to ten *Sturmgeschütz*, made possible by KStN 1149.

However, there was criticism. In October 1943, the OrgAbt gave a hint of a special problem with the planned large-scale introduction of independent StuGKp for infantry units:

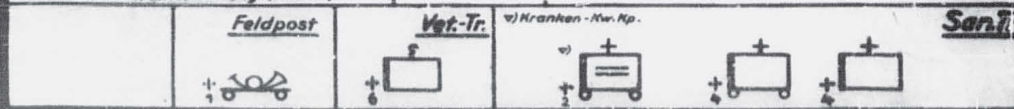
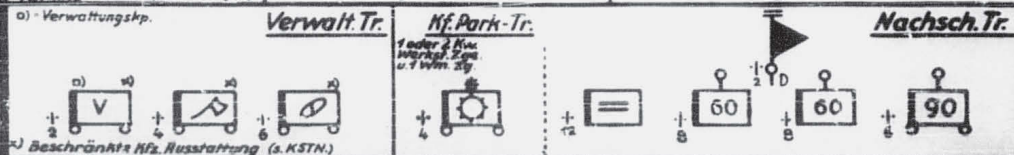
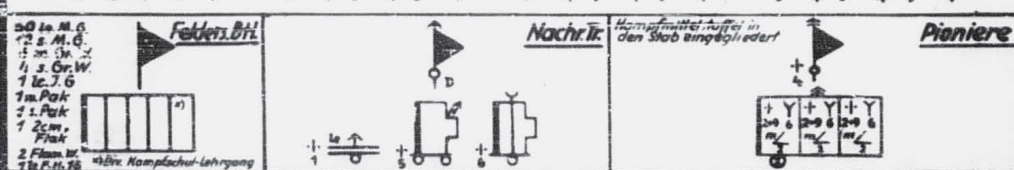
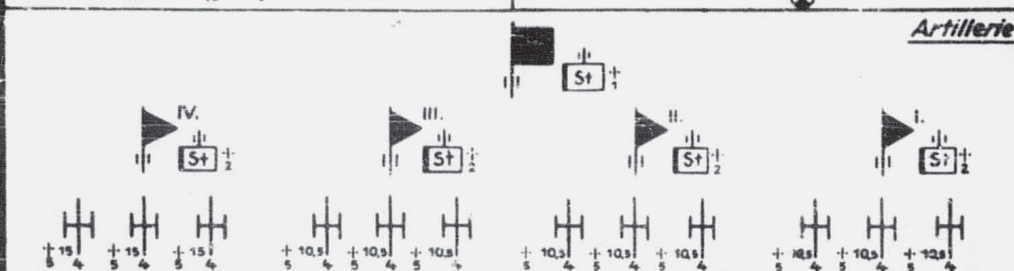
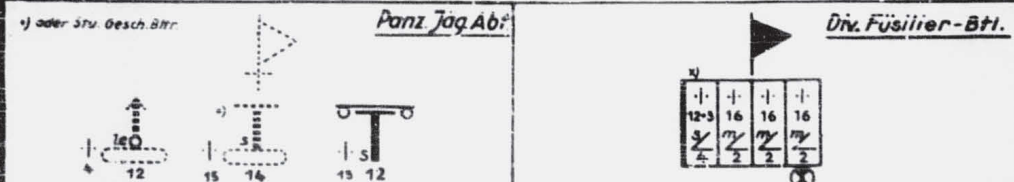
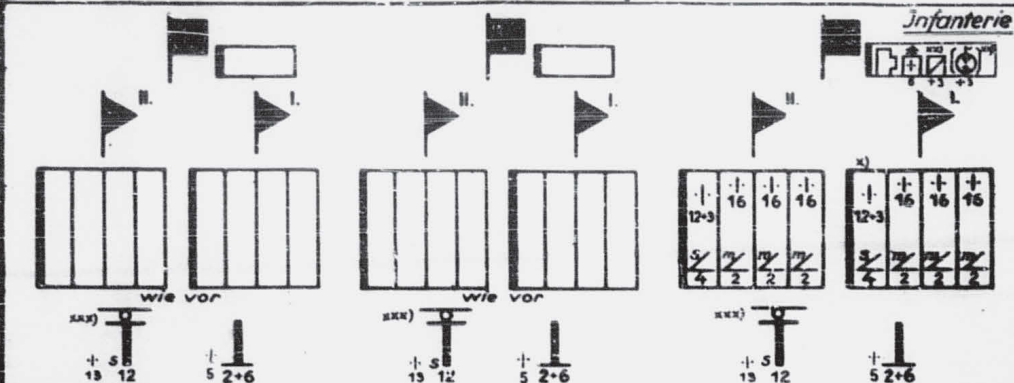
A *Sturmgeschütz* IV, from PzJgKp 1021, about to be loaded on a *Marinefährrahm* (MRP – sea-going lighter) at Gotenhafen (Gdynia), during the evacuation of German forces from Poland in early 1945. The StuG is fitted with swivelling-type *Seitenschürzen* (side skirts) a modification introduced by the manufacturer. (Anderson)

Inf. Division (n. A.)

Anl. 1 zu DKh/Gen St d. H./Org Abt.
Nr. 1 197/43 g. K. H. Angel. v. 2.10.42

*) E-dienst: 8 s. M.G., 3 s. M.G., 4 s. 2 cm Flak auf
E-dienst und 4 s. 6 cm Werfer
xx) Radfahr- oder Reiterzug
(Enderhebung durch zust. Abt. nach örtl. Verhältnissen,
pers. und materieller Lage)
xxx) Vorrat teilweise nach n. Pak. an Stelle fehl. s. Pak.

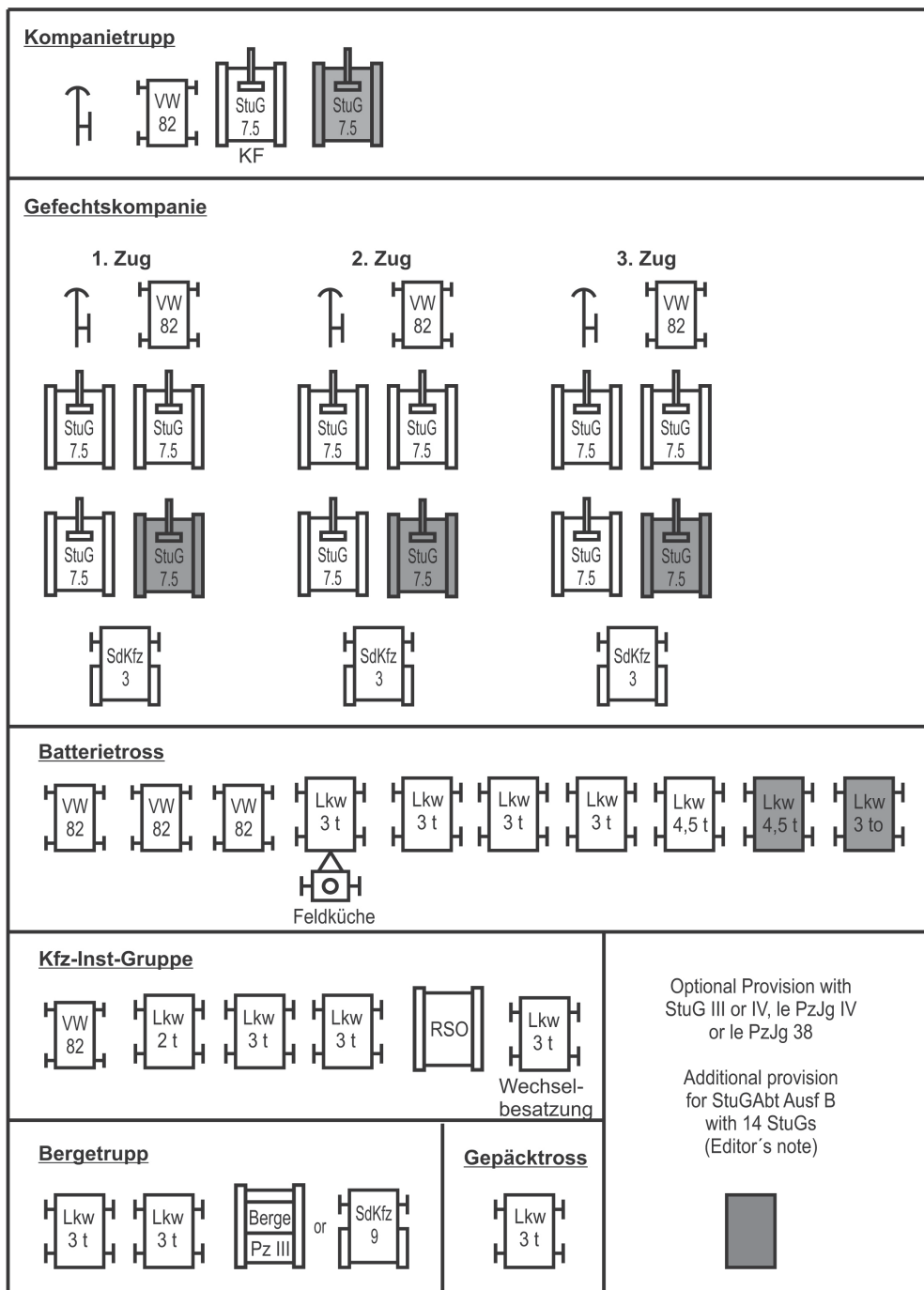
Zuführung des vollen Waffensolls erfolgt schrittweise.
Russtellung mit 8.8 cm R.P.z. B. 59 (4. Waffenteile nach Zuweisung)



Bemerkung: Musikkorps (soweit vorhanden) verbleiben ihren Btl.

Sturmgeschütz-Abteilung (in PzJgAbt) Ausf A (10 StuG) or Ausf B (14 StuG)

Table of organization according to KStN 1149, dated 1 February 1944.





An unusually marked *Sturmgeschütz* III; it has been painted with an oversize *Balkenkreuz* and a large letter 'G'. The latter possibly indicates that the vehicle is being used for training in an *Ersatzabteilung* (Ers-Abt – replacement battalion). (Anderson)

Subject: Independent StuGKp

- 1) Armoured vehicles need many specialists and special tools to be maintained, both of which are in short supply. So far the battalion is the smallest unit to have a workshop element.

Conclusion: Since independent companies will also require workshop elements, there will never be a sufficient number.

- 2) PzJgAbt (independent at army troop level) and StuGAbt will in future be issued with all types of *Sturmgeschütz* (StuG and *Jagdpanzer*). The tasks given to these services are identical: however the training will be conducted by two different services, and therefore cannot be consistent.

Conclusion: *Panzerjäger* and *Sturmgeschütz* units must belong to one service with standardized training.

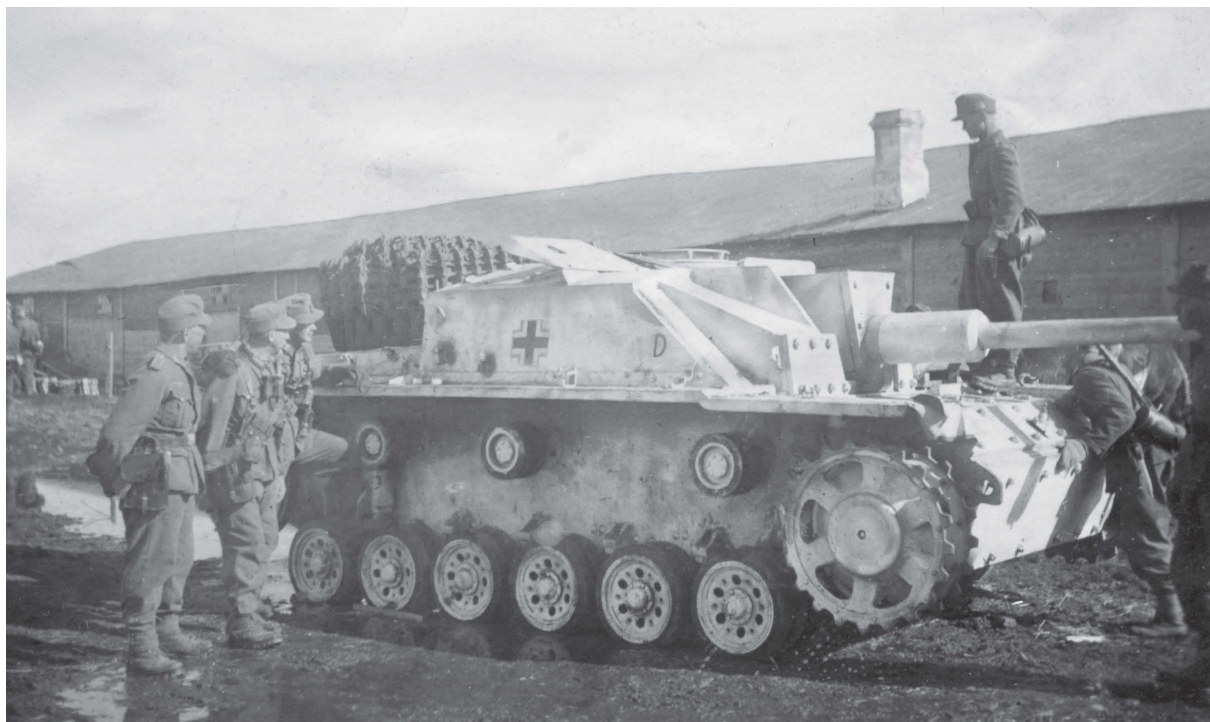
Suggestion:

All StuG and *Panzerjäger* within tank units must be part of the *Panzertruppe*.

All StuG and *Panzerjäger* outside tank units must be attached to the artillery.

Thus the *Panzerjägertruppe* should be transferred to the artillery and be trained accordingly.

Although this line of thought was understandable, the OrgAbt would not be able to enforce these ideas due to opposition by Guderian. Not surprisingly, the service would remain the responsibility of the *Panzertruppe*. However, the document had an appendix, which reveals vitally important facts:



- a.) One StuGKp for every infantry division = 2,000 StuG, or
 b.) alternatively 65 StuGAbt = 2,000 StuG

A total of 200 StuGKp will require 200 crane vehicles and 200 recovery tractors (SdKfz 9). A force of 65 StuGAbt will require only 65 crane vehicles and 65 SdKfz 9. This will result in an additional demand for 135 crane vehicles and 135 SdKfz 9.

These few lines once again give proof of the inability of the German armaments industry to fulfill the demands of the military. Indeed heavy tractors and crane vehicles were not being built in sufficient numbers and OrgAbt faced a continuous shortage of some 270 vehicles.

Furthermore, OrgAbt saw the planned provision of infantry units with small numbers of *Sturmgeschütz/Jagdpanzer* as critical due to a number of reasons. Early campaigns were successful because the *Panzertruppe* could assemble massed tank forces in order to achieve a breakthrough. Although the Panzer divisions had lost this operative power by late 1943, the fundamental idea behind it remained valid. Due to a shortage of resources, an equal distribution of *Sturmgeschütz* among a great number of infantry divisions could result in a fragmented commitment. OrgAbt began to think that a concentrated commitment using StuG or PzJgAbt (with 31 *Sturmgeschütz*) would have a greater impact against Soviet armour than would be possible by attaching ten or 14 StuGs to each infantry division.

However, it must be considered that OrgAbt preferred to continue with earlier, proven offensive tactics against enemy armoured forces. This was even

A *Sturmgeschütz* III Ausf G, which has been painted white for winter operations, receives maintenance ready for operation in the spring of 1944. Engineers from the workshop company have removed the early type of *Winterketten* (winter tracks) and have placed them on the engine deck, ready to fit standard tracks. The vehicle carries no markings other than a *Balkenkreuze* and a letter 'D' in black. (Anderson)



A *Sturmgeschütz* Ausf G from a late production batch lies abandoned in the main street of a battle-damaged town. The vehicle has a travel rest for the gun and there is a cast deflector on commander's cupola. (Anderson)

at a time when the overwhelming numerical superiority of the Red Army made the establishment of new spearhead units impossible.

Beginning in 1943, *Sturmgeschütz* were delivered to infantry divisions to establish an effective defence against the Soviets, rather than launch an offensive operation: the times had changed.

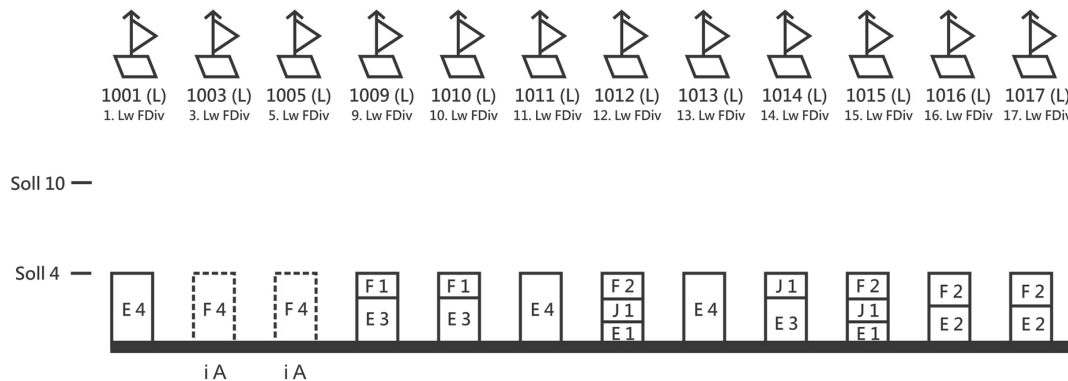
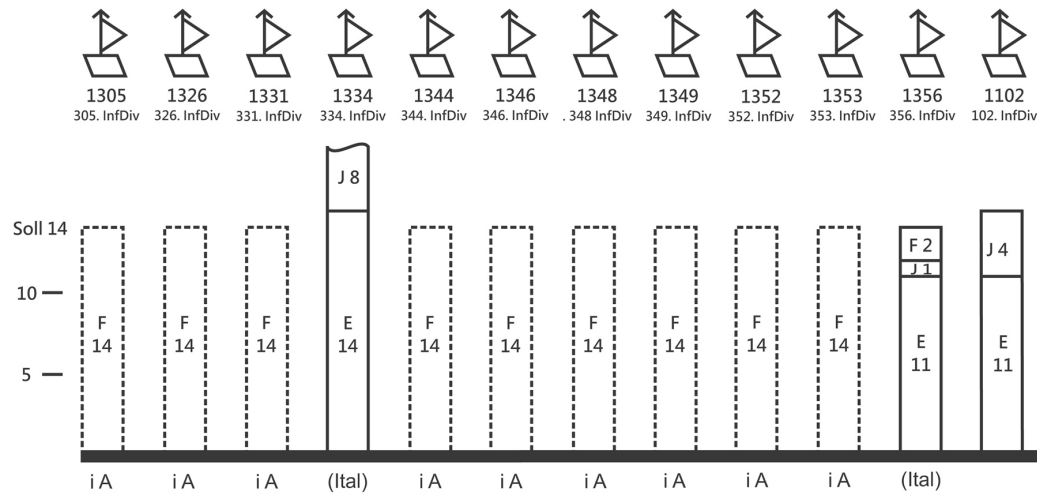
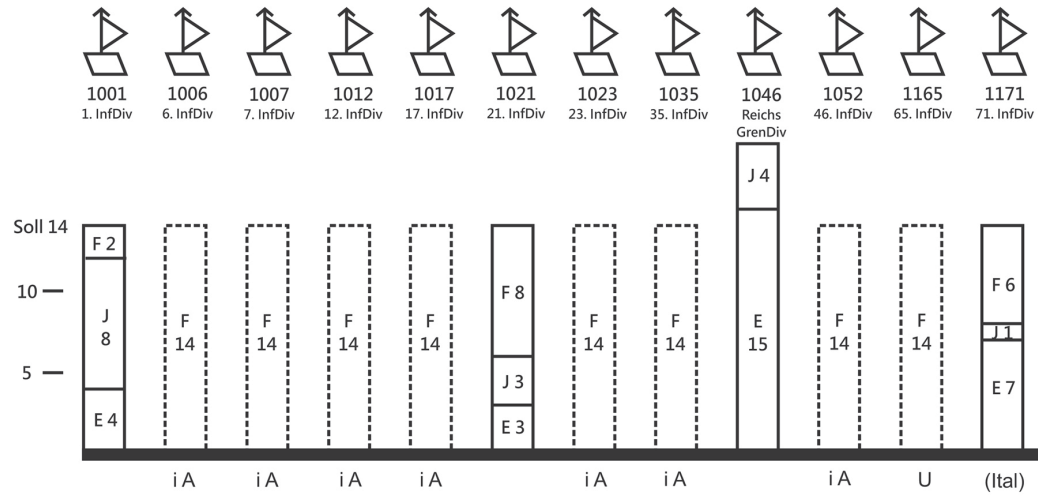
By January 1944, a total of 34 PzJgKp had been established. The units received the designation of their mother unit. For example, StuGs of the PzJgKp attached to 1.InfDiv received the number 1001, and those issued 344.InfDiv were numbered 1344. However, there were many exceptions.

The table on page 180–181 clearly indicates the situation in February 1944. At that time the large majority of StuGAbt intended for infantry, *Panzerjäger* and *Gebrigsjäger* divisions were in the process of being formed. At that time the table shows a shortfall of 366 *Sturmgeschütz*: Note the very low number authorized for the *Luftwaffe* field divisions which had been transferred on the authority of GenStbdH a few months earlier. The new target allotted only four *Sturmgeschütz* to an entire division.

In April 1944, the *Panzeroffizier* at the GenStbdH reported the status of reorganization in the respective *Heeresgruppen* (HG – army groups). At that time the vast majority were issued with StuG III or IV, and some with lePzJg IV. *Heeresgruppe* 'C' (Italy) had to rely on Italian-built *Semovente* (self-propelled) guns, being replaced by German vehicles as they became available. The infantry divisions noted under *Heeresgruppe* 'D' (France) were marked as being '*bodenständig*', a hint to the fact that the majority of material was taken from ex-French stocks, thus reducing their combat value significantly. By late 1943, all *Luftwaffe-Felddivisionen* had been transferred to the responsibility of the army, but identified by the suffix (Lw). These units had been authorized to have a very small StuG detachment.

A column of *Sturmgeschütz* having been unloaded at a harbour, (possibly Gotenhafen [Gdynia]), pass through a small village in Poland. Each vehicle carries two 200ltr drums containing fuel in preparation for a long march. Note the two horizontal band-type camouflage schemes on the *Seitenschürzen* (side skirts). (Hoppe)





StuG-Abteilungen in Inf and LwFeldDiv

Zusammenstellung / Compilation

Number of Abt in Combat 28

Target	248	
Actual	202	
Shortage	46	46

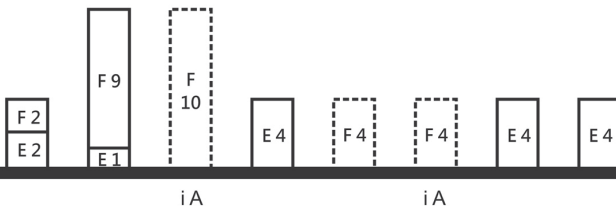
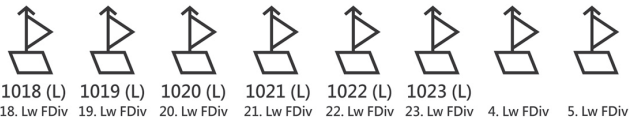
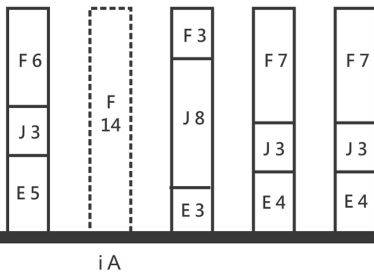
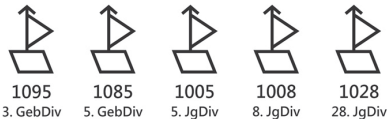
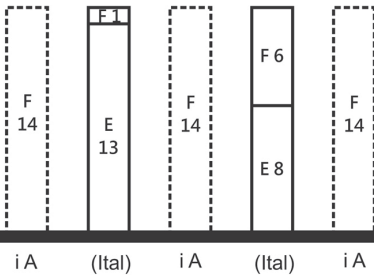
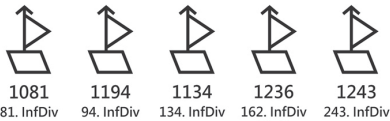
Number of Abt in Formation 26

Target	320	
Actual	0	
Shortage	320	320

Shortage Total 366

Nach Gen Qu StuG Lage Stand 31.1.1944

E = Einsatzbereit (Combat Ready), J = Instandsetzung (in Workshop)
F = Fehl (Shortage), S = Soll (Target), i A = in Aufstellung (in Formation)
U = Umbewaffnung/ Rearming with Italian Material





The crew of this *Sturmgeschütz* has decorated the *Seitenschürzen* (side skirts) on their vehicle with a cartoon image of the famous 'Baron Münchhausen', a fictional character from German literature. Note the *Sturmgeschütz* in the background has been fitted with Panzer III-style side armour. (Anderson)

1.) Units already being rearmed

*Heeresgruppe Süd*ukraine (Army Group South Ukraine)

3.GebDiv
17.InfDiv
46.InfDiv

*Heeresgruppe Nord*ukraine (Army Group North Ukraine)

1.InfDiv
72.InfDiv
214.InfDiv
349.InfDiv
367.InfDiv
100.JgDiv

Heeresgruppe Mitte (Army Group Centre)

5.JgDiv
14.JgDiv
6.InfDiv
7.InfDiv
102.InfDiv
129.InfDiv
131.InfDiv

Heeresgruppe Nord (Army Group North)

8.JgDiv
28.JgDiv
21.InfDiv

32.InfDiv

93.InfDiv

Heeresgruppe 'D'

243.InfDiv (*bodenständig* – locally sourced equipment)

326.InfDiv (*bodenständig*)

344.InfDiv (*bodenständig*)

346.InfDiv (*bodenständig*)

348.InfDiv (*bodenständig*)

353.InfDiv (*bodenständig*)

352.InfDiv (*bodenständig*)

Heeresgruppe 'C'

(With Italian equipment)

5.GebDiv

65.InfDiv

71.InfDiv

94.InfDiv

162.InfDiv

305.InfDiv

334.InfDiv

356.InfDiv

362.InfDiv

278.InfDiv

114.JgDiv

Reichsgrenadier Division Hoch und Deutschmeister

Heeresgruppe 'F'

SS-Polizei-Rgt (2 Kp)

Luftwaffe Field Division

(each with 4 to 6 StuG)

4.Lw FDiv (HG *Mitte*)

6.Lw FDiv (HG *Mitte*)

12.Lw FDiv (HG *Nord*)

13.Lw FDiv (HG *Nord*)

21.Lw FDiv (HG *Nord*)

16.Lw FDiv (West)

17.Lw FDiv (West)

18.Lw FDiv (West)

19.Lw FDiv (West)

21.Lw FDiv (West)

14.Lw FDiv (Norwegen)

A *Sturmgeschütz* III fitted with the early type of *Winterketten* (winter tracks) crossing an area of marsh-like terrain with a truck in tow. This was standard procedure on the Eastern Front. (Anderson)



2.) Units in the process of rearming

Heeresgruppe Mitte

12.InfDiv
26.InfDiv
31.InfDiv
35.InfDiv
36.InfDiv
45.InfDiv
95.InfDiv
110.InfDiv
129.InfDiv
131.InfDiv
134.InfDiv
206.InfDiv
267.InfDiv
342.InfDiv

The *Seitenschürzen* (side skirts) on a StuG could easily be damaged or completely torn off by heavy contact with an obstacle such as a stone wall, a tree or even thick scrub. The crew of this vehicle has made a repair by welding tubing to the upper brackets and securing the skirts with thick wire. (Anderson)

Heeresgruppe Nord

23.InfDiv
30.InfDiv
81.InfDiv

Befehlshaber der Ersatzarmee (BDE – commander-in-chief replacement army)

57.InfDiv
88.InfDiv
389.InfDiv

In the process of being rearmed with Italian material

65.InfDiv
162.InfDiv





3.) Units to be rearmed

Heeresgruppe Südukraine
4.GebDiv
320.InfDiv

Heeresgruppe Nordukraine
101 JgDiv
75.InfDiv

Heeresgruppe Mitte
197.InfDiv
337.InfDiv

253.InfDiv
Korps-Abt E

Heeresgruppe Nord
11.InfDiv
58.InfDiv
61.InfDiv
121.InfDiv
126.InfDiv

329.InfDiv

Prague 1945: A StuG III fitted with PzKpfw III style *Seitenschürzen* (side skirts) carries no identification markings, only a *Balkankreuze* on the side of the superstructure. (Anderson)





A *Sturmgeschütz* III Ausf G without *Seitenschürzen* (side skirts) or any unit identification passes a well-camouflaged supply truck. The small swastika on the door of the truck possibly indicates that it is from 5.SS-PzGrenDiv Wiking (Viking). (Anderson)



A recovery team has attached *Leichte Abschleppstangen* (light towing bars) to the towing eyes on this *Sturmgeschütz* III Ausf G in preparation for it to be hauled away. The maintenance hatches over the brake/final-drive units have been opened indicating the location of the failure. (Anderson)

PzJgAbt 246 of 246. Volks-Grenadierdivision

From late 1943 onwards, it was planned to complete the equipping of infantry units with *Sturmgeschütz* companies swiftly and to a set a standard. However, this process would be affected by the low number of *Sturmgeschütz* available, exacerbated by an overall shortage of soft-skinned vehicles and heavy half-track tractors. The ordnance office was forced to deliver what was available, including captured and foreign-built vehicles. Furthermore, the course of the war influenced the effectiveness of the infantry divisions (InfDiv) and *Volks-Grenadierdivisionen* (VGD); both were faced with many logistical problems.

A strength report from 246.VGD dated 1 November 1944 illustrates the problem. The unit, originally established as 246.InfDiv before the war, had been virtually annihilated during the Soviet assault on *Heeresgruppe Mitte* in the summer of 1944. What remained of the unit was then withdrawn to Milowitz training ground near Prague, where it was re-established as 246.VGD. It was then transferred to defend the border of the Reich near Aachen.

In August 1944, 246.VGD, had a complement of over 11,000 men and PzJgAbt 246 was attached as its tank destroyer element with 14 *Sturmgeschütz*



and 27 towed anti-tank guns as originally authorized. The anti-aircraft company was reinforced by a Flak-combat unit with seven 8.8cm FlaK.

Beside the PzJgAbt, 246.VGD had 36 guns in the artillery regiment and a vehicle allotment of 14 NSU *Kettenkräd*, 138 motorcycles, 125 cross-country cars and 28 staff cars, also 17 *Maultier* (Mule) half-tracked trucks, 60 cross-country trucks, 134 cargo trucks, three half-tracked tractors and 56 *Raupenschlepper-Ost* (RSO – fully-tracked carrier: east).

In March 1944, the OrgAbt attempted to make a comparison between German 44.InfDiv and a typical British partly-motorized infantry division. While the German unit had a theoretical complement of 804 motor vehicles of all types; a comparable British unit had a total of 3,572. Also 44.InfDiv had more than 3,000 horses in service, while the British had none. This astonishing difference would worsen as the war progressed. When compared to the proposed structure of 44.InfDiv, the VGD had an even weaker allocation of motor vehicles.

So much for theory: For instance, the reality of 1944 forced VGD to drop the *Kettenkräd*, and reported that only 44 per cent of its cross-country cars were operational, while the promised number of *Maultier* half-tracked trucks and cross-country trucks were never delivered. The artillery regiment had to

A late production *Sturmgeschütz III* Ausf G passes through a small town during the retreat from France in 1944. The crew has painted an image of the cartoon character 'Mickey Mouse' in front of the spare track carrier on the side of the superstructure. The vehicle is in a desperate state, two of the six road wheels are missing and the remainder have lost some of their rubber tyres. (Anderson)



A *Bergepanzer* III (recovery tank), from an unidentified unit, is fitted with the later type of *Ostketten* (east tracks); most units deployed to the Eastern Front were issued with these useful tracks. Additional ice grousers were mounted in the track links, whose incorporated grousers were totally worn off. (Anderson)

utilize captured equipment (seven 7.62cm Fk [r] and five 12.2cm le FH [r]), and the standard German material (nine 10.5cm le FH 18 and nine 15cm s FH 18).

In November 1944, an unknown commander delivered his own personal judgement, shortly before the Ardennes offensive:

Level of training

The subunits in the division were thrown into the *Grosskampf* (very heavy commitment) before the training could be accomplished. The immense losses were replaced by poorly trained soldiers taken from units without any combat experience. Half of the *Panzerjäger* complement is uneducated and also untrained. Training of drivers, especially those for the *Raupenschlepper-Ost* tractors, is difficult due to the shortage of fuel.

Constant fighting to hold defensive position, and the steady regroupings caused by the overall situation impedes the very necessary continuation of the training.

Troop Morale

Although reliable and eager, many soldiers are depressed by worries about their relatives suffering the terror bombing and the loss of their *Heimat* (home).



The situation is made worse by our poor postal service, the *Ostfreiwillige* (volunteers from occupied eastern countries) are orderly and industrious, but they are not much use in combat near the front. Their commitment in the rear area is advisable.

Special problems

Command in the grenadier regiments is weak, and only few trained *Panzerjäger* soldiers are available. The lack of footwear, tents, water, anti-tank mines, flare pistols and the following munitions: heavy mortars and 3.7cm FlaK only add to our problems. Overall mobility is poor due to the lack of cross-country vehicles: 40 per cent of all our motor vehicles are in a poor mechanical state.

This *Sturmgeschütz* III Ausf G has been modified beyond recognition. Additional armour plates have been attached to front of the superstructure, and the machine-gun shield has been replaced with a simple steel plate. Note that the commander's periscope has been fitted with lens hoods. (Anderson)

A strength report published in December 1944, shows that the vehicle situation had continued to deteriorate. Of the 14 authorized *Sturmgeschütz*, only five had survived and two of these were in need of short-term repair. Also the number of anti-tank guns had decreased from 27 to four; and only seven of the 54 *Raupenschlepper-Ost* remained serviceable. Subsequently, the commander gave his unit a low combat rating (IV).





Denmark, 1944: Vehicles of *Sturmgeschütz Ersatz und Ausbildung Abteilung* (Ers und AusbAbt – replacement and training battalion) 400, at their base in Viborg. The unit had been transferred to Denmark in July 1943. At least four different variants are visible; an Ausf B and an Ausf D, also an Ausf F and an Ausf G. Such a very mixed allotment of short and long-barrelled StuGs was quite normal for training cadre and regular units. One of the vehicles is fitted with air filters for hot and dry conditions. (Anderson)



Increased Production 6

A year after the catastrophic winter of 1941, the situation for the German army in the east, especially the infantry divisions, worsened. After the stalemate during the winter of 1942, the Soviets would achieve many great (if costly) successes beginning with victory at Stalingrad, the recapture of Velikiye-Luki and a short time later the recapture of Demyansk. Slowly but surely, and with growing confidence, the Red Army was able to increase its operational opportunities. German forces now faced ever increasing numbers of Soviet tanks and vast numbers of infantry were forced back on the defensive.

Although German anti-tank capability had been significantly improved with the introduction of the 7.5cm *Panzerabwehrkanone* (PaK) 40, there was still a problem. The weight of the 5cm PaK 38, already in service, made it very difficult for the crew to move, but the PaK 40 was even heavier. Any change of firing position relied on the use of a prime mover and since these vehicles were in short supply, the situation for PaK 40 crews became untenable. Infantry units in a PzAbt were issued with an increasing number of self-propelled guns, but there would never be enough.

If attacks by enemy tanks could not be repelled, the defensive front held by German infantry would be overrun and enemy infantry, following the tanks, would then occupy the positions, forcing a retreat. On many occasions this had a disastrous effect on the morale of the German troops and *Panzerschock* (tank shock) returned.

When the situation on the Eastern Front was affected more and more by these breakthroughs, the question of anti-tank defence finally required an urgent solution. Reality would show that attack missions or an effective defence was only possible when a StuGAbt was available.

Quite logically, it was now discussed whether to provide the infantry divisions with integral assault gun units, similar to those elements attached to the *Luftwaffe Feld Divisionen* (LwFeldDiv – air force field divisions).

Troops of
8.SS-Kavalleriedivision
(cavalry division) Florian
Geyer wait in a Ukrainian
village as a *Sturmgeschütz*
from their PzJgAbt passes.
(NARA)



A *Sturmgeschütz* Ausf G in France, 1944: The Zimmerit coating is of the pattern applied by Alkett and the vehicle has a standard-type stowage frame fitted around the engine deck. The *Seitenschürzen* (side skirts) are of a later improved type fitted with triangular-shape hooks. Note the *Maschinengewehr* (MG) 34 has been mounted on top of the gun shield, to allow fire against enemy aircraft. (Hoppe)

On 22 September 1943, PzJgAbt 31 (31.InfDiv) submitted an after-action report on the effectiveness of its anti-tank weapons. Reports like this were numerous, and all more or less underlined the need for better weapons in the infantry divisions.

Subject: Meeting on questions regarding anti-tank defence

I. Experiences with PaK [Sfl] and StuG

- 1) The 7.5cm PaK 40 Sfl 38(t) (148hp Praga engine) performed extremely well and fully met the requirements, in contrast to the 7.62cm PaK 36(r) Sfl 38(t) (125hp Praga engine).
- 2) With regard to the critical equipment situation, any delivery of self-propelled anti-tank guns for the tank divisions is unnecessary. Instead, it is more sensible to issue these weapons to infantry division.

Reasons:

- a) Anti-tank defence in tank divisions is guaranteed by the arrival of vehicles armed with 7.5cm KwK 40 L/48 gun. During the recent fighting, self-propelled guns were used by tank divisions mostly in the same manner as a tank. This is a task self-propelled guns cannot fulfill, therefore this commitment turned out to be very poor.
- b) Since size and weight of the PaK mot Z (towed anti-tank guns) are



significantly increasing, a rapid move into position and having time for camouflage is becoming more difficult.

- 3) The best solution for the question of new equipment for the tank-destroyer battalions would be to issue them exclusively with *Sturmgeschütz*. As long as this is not possible, we suggest provision of one company PaK (Sfl) (self-propelled anti-tank guns) and one company with assault guns.

Reasons:

- a) The PaK (Sfl) and the *Sturmgeschütz* complement each other.
- b) A sole establishment of an PzJgAbt with PaK (Sfl) is not practical, since the infantry compares it with assault guns resulting in exaggerated expectations, which the PaK (Sfl) cannot fulfill.
- c) A further advantage of a StuG company within the PzJgAbt is the fact that the commander (of the InfDiv) will always have direct access. This is in most cases is not feasible with a *Heeres-Sturmgeschütz-Abteilung*, with batteries dispersed over two or three divisions. This split will lead to problems with supply lines for the battalion and workshop units in the rear.

This opinion was supported by many identical after-action reports. The commander of PzJgAbt 31 clearly recognized the advantages of allotted assault guns.

This early production *Sturmgeschütz* Ausf G does not have a Zimmerit coating and is fitted with *Nebelkerzen-Wurfgeräte* (smoke candle dischargers). The chassis number 92991 stencilled on the front plate indicates that it was built in early 1943 by Alkett. (Münch)

**Above:**

Having been almost annihilated at Stalingrad, what remained of 60. InfDiv was re-established at St Raphaël in the South of France, and subsequently renamed as PzGrenDiv Feldherrnhalle (FHH). The unit had a mixed PzAbt with two tank and two *Sturmgeschütz* companies. In December 1943, FHH was transferred to *Heeresgruppe Nord* (Army Group North) at Narva, Estonia. (Anderson)

Right:

A *Sturmgeschütz* of PzGrenDiv FHH in St Raphaël, November 1943. The gun mantlet is protected by a factory-made dustcover. (Anderson)





In September 1943, the commander of 16.PzGrenDiv complained of declining morale in his infantry:

The *Panzerschreck* [tank shock] in our infantry is still alive, and it can be only overcome when:

- a) The infantry positions a sufficient number of heavy anti-tank weapons directly in the *Hauptkampflinie* (HKL – main line of resistance)
- b) If the infantrymen can be absolutely sure that enemy tanks which have broken through will definitely be destroyed.

The report continues that if these conditions are not met, the infantryman will not be able to withstand tank assaults as a direct result, and he demanded a sufficient allotment of heavy anti-tank guns. However this was not possible and due to the relative immobility of these towed anti-tank guns, even the powerful PaK 40 would have been of little value. At this time of mobile warfare, a fixed anti-tank position was always in danger which inevitably led to the loss of the weapon.

In his report, the commander explained that his PzJgAbt was not able to perform as *Panzerjäger* in the true sense of the word – the mission to actively hunt down enemy tanks. His report continues:

The *Räder-PaK* (towed anti-tank guns) can never be a *Panzerjäger*, since it cannot be used against enemy tanks that have broken through. This applies also

A *Sturmgeschütz* Ausf. G: The crew shows the workings of their vehicle to Italian townsfolk. (Anderson)



A *Sturmgeschütz* of 2.SS-PzDiv Das Reich during the funeral ceremony for a comrade killed in action. The name SS-Unterscharführer Hoffmann, possibly the person killed, is painted on the side of the superstructure. (Anderson)

to the 8.8cm PaK. The only weapon suitable to hunt and destroy tanks is the *Sturmgeschütz*. If the infantryman can be sure to have a sufficient number of *Sturmgeschütz* supporting him, or if he has had first-hand experienced as to how easily *Sturmgeschütz* can destroy broken through tanks, he will keep calm and will learn to keep low in his hole until the tank has passed-over him, knowing that the assault guns will keep his back and flanks safe.

Heeres-Sturmgeschütz-Abteilungen, which will be distributed over the combat sector of an entire corps, cannot fulfill this task. To give the infantryman the security he requests, the infantry division must have a battalion with at least two batteries. The PzJgAbt can be dropped.

Signed: *Generalleutnant* Gerhard Graf von Schwerin

The statement of the commander of 16.PzGrenDiv is fully understandable. However, it is interesting to note the degree to which the officer (among many others) is fixated on the *Sturmgeschütz*. A tank such as the PzKpfw IV Ausf G to H armed with the 7.5cm KwK L/48 would have been equally effective. There were some examples where a small number of infantry divisions were issued with tank battalions. However, the troop demanded assault guns.

Finally, the OrgAbt took the decision to issue only one company/battery as a reinforcement to the divisional PzJgAbt.



Increased Production

In January 1944, a table 'StuGAbt in PzDiv and PzGrenDiv' was published showing the actual unit strengths.

Firstly 12 *Heeres* (Army) and Waffen-SS PzGrenDiv were each issued with a *Panzer-Sturmgeschütz-Abteilung* (45 StuG), with three more to be established. Furthermore, 11 Panzer divisions were available; six for the Waffen-SS, four for the army and one for the *Luftwaffe* with reported strengths varying from seven to 43. The Grossdeutschland unit was listed here as a Panzer division (still with a 1942-style *Sturmgeschütz-Abteilung* of 21 StuG), although it had officially been called a PzGrenDiv since June 1943. PzDiv Hermann Göring is also noted although officially being a *Luftwaffe* unit, it fought under the command of the army.

Some special units also received assault guns. These miscellaneous formations showed a very varying establishment.

Despite the 'temporary' character of the *Sturmgeschütz* allocations for the Panzer divisions, the practice would continue. In late summer 1944, more units would receive *Sturmgeschütz* or *Panzerjäger*, among them new Panzer brigades. *Sturmgeschütz* had to replace missing PzKpfw IV tanks, or *Panzerjäger* such as Panzer IV/70 (V) and *Jagdpanther*.

The *Sturmgeschütz* carrying this coffin was built on the chassis of a PzKpfw III, identifiable by the horizontal exhaust silencer (muffler). (Anderson)



Thought to be a vehicle from PzJgAbt 1095 from 3.GebDiv, this *Sturmgeschütz* has what appears to be an Ausf F chassis fitted with the superstructure of an Ausf G. The vehicle is fitted with late-type *Ostketten* (east tracks) and *Seitenschürzen* (side skirts). (Anderson)

August 1944

PzJgAbt 559: two companies with 28 StuG III

September 1944

PzJgAbt 519: two companies with 28 StuG III

PzBrig 111: one company with 10 StuG III

PzBrig 112: one company with 10 StuG III

PzBrig 113: one company with 10 StuG III

October/November 1944

2.PzDiv: 49 StuG III

December 1944

9.PzDiv: one company with 14 StuG III

116.PzDiv: one company with 14 StuG III

February 1945

PzJgAbt 510: three companies with 30 StuG III

March 1945

PzRgt 2 (army troop): 31 StuG III



By late 1944, further PzJgAbt of PzDiv and PzGrenDiv had *Sturmgeschütz* in their inventory, although not officially authorized.

PzJgAbt 38 of 2.PzDiv
PzJgAbt 61 of 11.PzDiv
PzJgAbt 2 of 12.PzDiv
PzJgAbt 53 of 5.PzDiv
PzJgAbt 51 of 26.PzDiv
PzJgAbt 18 of 18.PzGrenDiv
PzJgAbt 29 of 29.PzGrenDiv
PzJgAbt Das Reich

Concealed at the side of a peasant's cottage, the crew of a *Sturmgeschütz* III Ausf. G from 5.SS-PzDiv Wiking (Viking) cover their vehicle with a heavy tarpaulin for protection against the Russian weather. (NARA)

Distribution Problems

On 23 March 1944 during a *Führervortrag*, Guderian demanded clarification of reports relating to an alleged increase in the number of StuGAbt (under the command of the *General der Artillerie*) to 54. He reminded the military officers and civil officials attending the meeting of the recently agreed limitation of 45. Any further increase in the number of StuArt units, with all associated problems such as replacement equipment, would be impossible due limited production capacity.



In early 1944, SS-PzDiv Das Reich was engaged in combat near Cherkassy on the River Dniepr during the Battle of Korsun. A column of *Sturmgeschütz* from SS-StuGAbt 5 is shown; all are fitted with the early type of *Winterketten* (winter tracks) to improve traction. The crews of all the vehicles have used spare track links to protect the superstructure. (Anderson)





A *Sturmgeschütz* Ausf G built on a PzKpfw III hull, in service with an *SS-Ersatz und Ausbildungsabteilung* (replacement and training battalion) on the Debica training ground in Poland. The vehicle carries the name *Montabon* (a commune in the Loire, France) on the side of the superstructure. Note that some links of early-type *Winterketten* (winter track) have been randomly inserted in the standard 40cm tracks. (Schneider)

Guderian also said that he was fully aware that production was barely sufficient to satisfy the demands of the *Sturmartillerie* and his *Panzerjäger*. Furthermore, he had to accept that the 'temporary' substitution of tanks in the Panzer divisions by *Sturmgeschütz* would continue for longer than expected.

However, Guderian would continue to demand that the number supplied to the *Sturmartillerie* should be limited to 200 each month. Quite naturally, his argument did not impress the *General der Artillerie*: In June his department insisted on the agreed delivery of 375 *Sturmgeschütz* each month as the lowest number to guarantee expansion of all 45 battalions (at that time renamed to brigades) to the target of 45 assault guns each, and to replenish the number lost in action.

Guderian also complained of the poor situation in regard to recovery and maintenance; a lack of recovery vehicles, spare parts and a shortage of supply vehicles resulted in a decreased number of tanks and assault guns being available for front-line units. This was a misleading complaint as the overall number of tanks and assault guns/tank hunters being produced was slowly increasing.

In his report, Guderian cited from the problems of *Heeresgruppe Süd* (Army Group South):

At Uman some 300 tanks were captured by the enemy, *Heeresgruppe Süd*, as the responsible authority, reported:

The repair of the damaged tanks at Uman was impossible due to the lack of spare parts. With a sufficient supply, the repair of the majority of these tanks



would easily have been possible. An evacuation of the immobilized tanks was not feasible because of the lack of heavy half-track tractors and an overall inadequate transport situation.

SS troops swearing an oath to the Führer during a commissioning ceremony: All the *Sturmgeschütz* are standard early-type Ausf G. (Anderson)

In the first half of 1944, Guderian attempted to accelerate the equipping of infantry divisions with assault guns. On 2 June 1944, he wrote to the Chief of the General Staff, *Generaloberst Zeitzler*:

Der Generalinspekteur der Panzertruppen

2 June 1944

Re: The employment of *Panzerjäger-Sturmgeschütz-Abteilungen*.

Various reports submitted to me indicate that some erroneous conceptions exist about the employment and affiliation of the *Panzerjäger-Sturmgeschütz-Abteilungen*.

This makes me give the following opinion:

The decisive importance of the *Panzerabwehr* makes a fundamental re-arming of the PzJgAbt necessary. At my instigation, the rebuilding of the PzJgAbt was therefore initiated and the first goal was set for the re-arming of one company of each battalion with *Sturmgeschütz* and *Panzerjäger*.

The outfitting of the *Panzerjäger* units with this equipment does not mean a fundamental change, but at most an extension of their duties. This was already clearly defined in earlier reports.

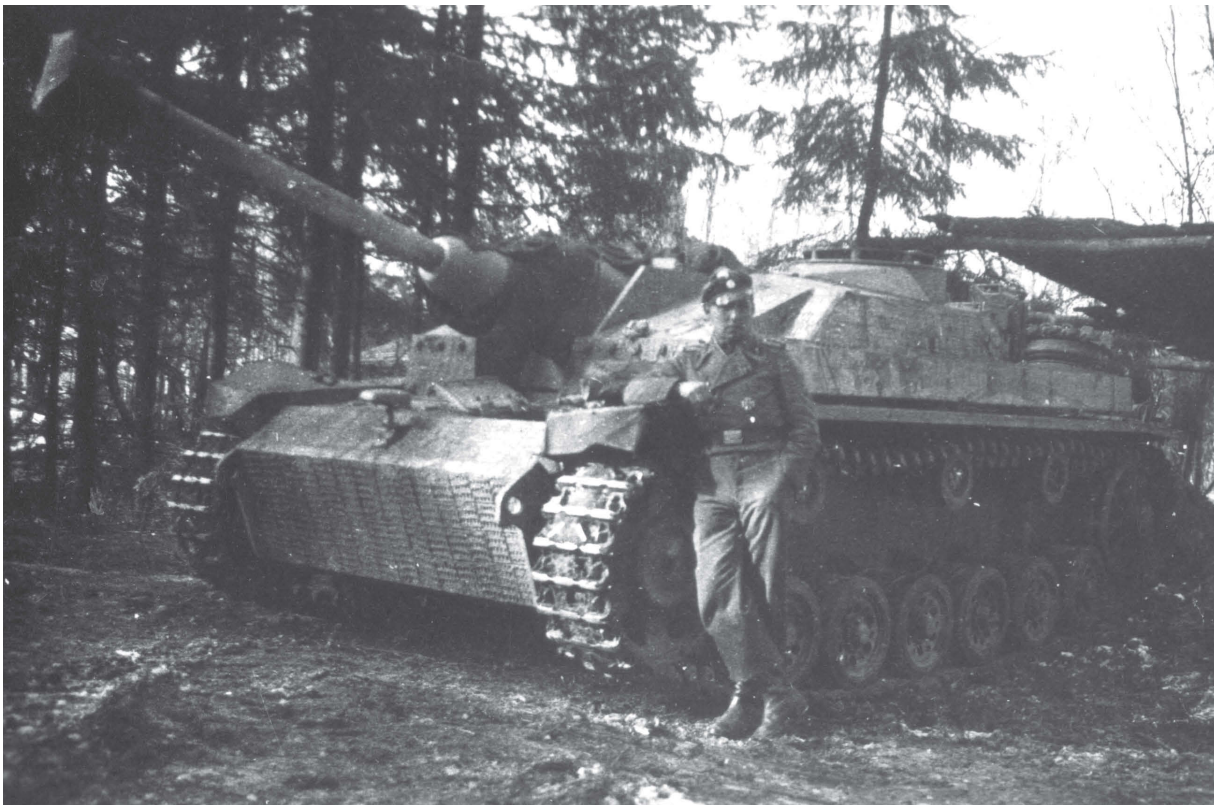
The most important task of the *Panzerjäger-Sturmgeschütz* units is the destruction of enemy tanks, the most dangerous opponents of our infantry. They, therefore, are the prime support for the infantry, because the solution to anti-tank defence is that it is of prime importance to hold any position. If the *Panzerjäger* is not bound by this task, they then can be used in direct support of the infantry in attack and defence.

The *Panzerjäger-Sturmgeschütz* units have not taken over the tasks of the *Sturmartillerie*, but they only operate as *Panzerjäger*. Any use under other terms or unauthorized creation of other subordinated attachments (i.e. under the *Artilleriekommando* (Arko – artillery command) means an alteration to their original tasks and endangers the structure of the *Panzerjägerwaffe*. I therefore request to issue an order on the attached proposal to the *Oberkommandos* of the *Heeresgruppen* and the *Armeen*.

Guderian

A mid-production *Sturmgeschütz* has an Alkett-applied Zimmerit coating, and is fitted with a cast *Saukopf* (pig's head) mantlet and the cast deflector in front of the commander's cupola. (Anderson)

Personnel of struggling infantry divisions were transferred to *Truppenübungsplatz* (military training ground) Mielau in central Poland to undergo conversion to the *Sturmgeschütz*. The pace was slow; an average of only ten battalions was established each month. In April 1944, Mielau





reported having trained five StuGAbt (i.e. companies) and that a further ten units were selected. From lessons learned during the first conversions, Guderian insisted that only tank destroyer personnel were to be considered.

He also ordered that any soft-skinned vehicles that were in good condition were to be taken back with the unit. This was unusual, as only personnel were transferred; equipment was left behind and distributed to other front-line units.

Combat

The disadvantages of *Sturmgeschütz* with tank units were known. In June 1944, PzAOK 3 reacted by publishing a note explaining their view for the tactical deployment of a StuGAbt:

A number of divisions of the tank army received a *Sturmgeschütz-Abteilung* within the frame of their divisional tank destroyer battalion; further divisions

SS Hauptsturmbannführer Rennert of SS-StuGAbt 9 wears the standard communications equipment for a StuG commander; headphones and a throat-type microphone. He has turned the cupola so that the open hatch will provide some protection against fire from the front. (Schneider)

A *Sturmgeschütz* III from 5.SS-PzDiv Wiking hidden in the lea in a Russian farmhouse. Note the massive 80mm frontal armour plate. (NARA)



**Above:**

In early July 1943, SS-PzDiv Das Reich was positioned near Kharkov waiting to be replenished with new equipment. At around this time *Seitenschürzen* (side skirts) were being fitted to production *Sturmgeschütz*, and also began to be sent to front-line units to be fitted by workshop companies. The skirts of this vehicle have been modified by field engineers. (NARA)

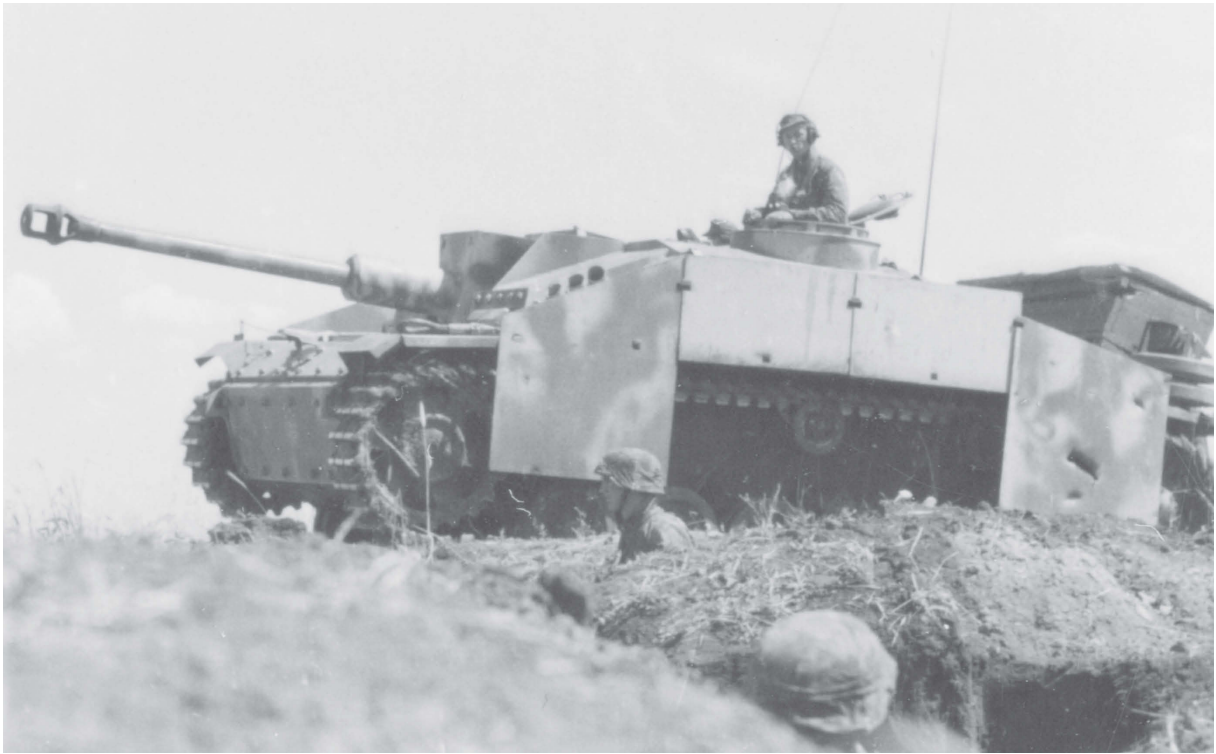
Right:

The crew of a *Sturmgeschütz* prepares their vehicle for service. This was a mid-production vehicle manufactured by MIAG, identified by their style of applying Zimmerit. (Ullstein)





A photographer from a German intelligence/reconnaissance unit uses a camera, fitted with a high-performance telephoto lens, to take images of enemy positions and equipment. Ground-based and aerial reconnaissance was vital for positioning defensive forces or the planning of an assault. (Getty)



A *Sturmgeschütz* Ausf G of 2.SS-PzDiv Das Reich moves past grenadiers in a trench during fighting around Kursk in 1943. Parts of the *Seitenschürzen* (side skirts) are missing, and the rear plate has been damaged by shell splinters. (NARA)

have transferred tank destroyer units to Mielau for being rearmed with the *Sturmgeschütz*. The purpose of this measure is to provide the division with a strong armoured punch for attacks and counterattacks. At the same time the StuGAbt represents a mobile reserve against any further enemy tanks. The divisional StuGAbt should not be deployed outside the frame of its mother unit. The grenadier elements in the division should be, according to the situation, trained to support the StuGAbt.

This note shows that the commander of PzAOK 3 did not understand the purpose of the new *Panzerjäger-Sturmgeschütz-Abteilung* and is in clear contradiction to the earlier statement made by Guderian.

However, weapons like the *Sturmgeschütz* were a true enhancement to the arsenal of an infantry division, and would be used when and where they were needed, independent of the guidelines set by Guderian.

The note also highlights the shortcomings of a *Sturmgeschütz* and the dependency on the infantry to protect their flanks during a battle.

In previous years, *Sturmgeschütz* with the artillery were attached to either an infantry or a tank division. Coordination with these units was not always positive, the benefits of the *Sturmgeschütz* were overestimated, and the shortcomings ignored. In the worst case, occasionally StuGs were sent into action without infantry support in the vague hope that their armour and firepower would overcome all odds.



As a direct consequence, *Sturmgeschütz* units (artillery, deployed at army troop level) were issued with *Begleitgrenadier* (escort grenadier) units; purposely trained, specialist support units with the sole task of supporting the *Sturmgeschütz* in the attack or retreat. In case of the battalion size units for the *Sturmartillerie*, these were to be organically incorporated as the fourth battery in a *StuG* brigade.

For the much smaller *Panzerjäger-Sturmgeschütz-Abteilung* (PzJgStuGAbt) in infantry divisions similar escort units could not be allotted. Aware of the shortcomings of the *Sturmgeschütz* and *Jagdpanzer*, the department of the *Generalinspekteur der Panzertruppe* (GenInspPzTrp) decreed the establishment of *Grenadier-Begleitzüge* (GrenBeglZg – escort grenadier platoons) as follows:

Grenadier-Begleitzug for *Jagdpanzer* and also *Sturmgeschütz*.

In October 1944, OKH/GenInsp d PzTrp decided that all infantry, grenadier, *Volksgrenadier*, Gebirgs and *JägerDiv*, which have already been issued with *Jagdpanzer* or *Sturmgeschütz* are instructed to establish *Grenadier-Begleitzüge* “auf dem Kommandowege” (using their own means).

The GrenBeglZg will be directly attached to the PzJgAbt and its sole mission is to escort the attack by the JgdPz or StuG. The GrenBeglZg must not be used to hold an area after the JgdPz or StuG have been withdrawn.

Only the best soldiers are recruited for the GrenBeglZg. After probation the

Seitenschürzen (side skirts) became standard equipment from early summer 1943. Although very effective against Soviet anti-tank rifle fire, their mounting brackets were extremely vulnerable to damage. Front-line units did their best to improve these items by adopting their own modifications. Here heavy bolts have been welded directly to the superstructure (NARA)

**Above:**

Axis forces (Italian, Romanian and later Hungarian) attached to *Heeresgruppe Süd* (Army Group South) did not have tanks able to fight modern Soviet types. Small numbers of Panzer IV and some *Sturmgeschütz* were supplied to Hungary as military aid. This Turan II has been destroyed by a direct hit on the turret. (Anderson)

Right:

While trying to pass a peasant's hut, a *Sturmgeschütz* Ausf. G has become bogged-down. The recovery crew has attached a *schwere Zugkraftwagen* (s ZgKw) 18t (SdKfz 9) in an attempt to haul the assault gun out of the deep mud. (Anderson)



members of the GrenBeglZg will get the note in their service papers: "To be used only in *Grenadier-Begleitzug*".

A GrenBeglZg is formed as follows:

Platoon leader	(One officer)
Platoon command group	(One NCO, Four troopers, including a pioneer)
Three groups	(One group in each JgdPz platoon)
1 special purpose group	(One NCO, 14 troopers, including a pioneer)
1 reserve group	(One NCO, Two troopers)
Combat train	(A commander, Five troopers, Three riflemen, a pioneer)

To ensure high firepower and great mobility, all should be armed with the *Sturmgewehr 44*. This is a priority.

In September 1944, the GendPzTrp decided to rename the StuGAbt within PzJgAbt to *Panzerjäger-Kompanien* (PzJgKp) but retained their numerical identification.

After-action Reports

There are few after-action reports known of StuG-equipped PzJgAbt or companies. Two were published in the *Nachrichtenblatt der Panzertruppen* (bulletin of the armoured troops) dated September 1944.

The amphibious VW *Typ 166 Schwimmwagen* was probably the most versatile and mobile German vehicle used in World War II. Powered by an air-cooled four-cylinder engine the type was used on all battlefronts. This vehicle belonged to PzJgAbt 1095. (Anderson)



A *Sturmgeschütz* Ausf G from SS-StuGAbt 1007 of SS-Freiwilligen-Gebirgsdivision Prinz Eugen when the unit was in Yugoslavia during August 1944. This notorious unit mainly fought partisan forces and was feared for its brutality. Note the searchlight fitted on the superstructure. (Anderson)







The crew of a *Sturmgeschütz III* Ausf G from StuGAbt 1095, 3.GebDiv, begin to apply a coat of whitewash to their vehicle in preparation for winter operations. Behind the StuG is an SdKfz 10/5 half-track vehicle mounting a 20mm cannon used to provide heavy support fire; many after-action reports praised the effectiveness of the type. (Anderson)

During the course of the collapse of *Heeresgruppe Mitte* (Army Group Centre), 45.InfDiv with PzJgAbt 45 was annihilated. In July, re-establishment took place at Döllersheim, a military training area in Austria, where it was renamed as 45.VolksGrenDiv. The unit was then sent to Poland, where it was involved in heavy fighting south of Warsaw at the Warka bridgehead. The unit's PzJgAbt included a *Sturmgeschütz* company, PzJgKp 1045. The commander of PzJgKp 1045 submitted this in August 1944:

After-action report from *Panzerjäger-Kompanie* 1045 equipped with *Sturmgeschütz III*:

The company was provided as a divisional reserve. In the afternoon, the enemy launched an attack after a preparatory heavy artillery bombardment. The assault by 30 tanks, mostly T-34/85 and KV-1 was supported by *Schlachtflieger* (strafing aircraft). Using elements of five to six divisions the enemy strove to enforce a breakthrough in this sector. The terrain was favourable to the enemy, small areas of scrub and woodland offered cover for his gun positions and assembly areas.

The company countered the enemy with nine *Sturmgeschütz*. During the first day of combat we destroyed:

16 T-34/85

One KV-1



Two T-34 (immobilized)
 17 Machine guns
 Two Infantry mortars
 Two Forward observers with radios
 One Anti-tank gun
 One Artillery gun

During the second day:
 Two T-34/85
 One Self-propelled gun
 21 Machine guns
 Three Anti-tank rifles
 Two Anti-tank guns

The tanks were destroyed at a range of between 600 and 800m, one assault gun destroyed five tanks out of the column within 15 minutes. HE shells had an extraordinary success on soft targets. The provision of the *Sturmgeschütz* with *Maschinengewehr* (MG) and *Maschinenpistole* (MP) proved to be advantageous, and enabled the suppression of enemy close-combat [anti-tank] teams and infantry. It must be added that on the harvested fields the corn was stored in stooks. During a counteroffensive, the Russians fired incendiary shells and

A *Sturmgeschütz* Ausf G from the Prinz Eugen division: The *Maschinengewehr* (MG) 34 has been mounted on the top of the gun shield to enable the gunner to engage enemy aircraft. Note the slot in the shield has been enlarged, possibly to improve gun elevation and side traverse; the latter was important for combat in forested terrain. (Anderson)

three *Schützenpanzerwagen* [SPW – armoured half-track vehicle], concealed on the field were set on fire..

Some 30 minutes after the beginning of the attack, the Russians began using our radio frequency in an attempt to discover the position reports from our *Sturmgeschütz* using the code name given to our company commander. The commander was forced to change the frequency three times during the battle.

Finally, it can be said that after his great losses, the opponent did not continue to accompany his infantry assaults with tanks, but positioned them in prepared positions.

Another report was submitted by PzJgKp 1253 of 253.InfDiv. This unit was also part of *Heeresgruppe Mitte*, which in summer 1944 was forced to make a defensive retreat to Kovel:



A *Sturmgeschütz* of 3.SS-PzDiv Totenkopf (Death's Head) moves through front-line positions during the Kursk campaign. All infantry trenches could be dangerous to the armour of both sides during the heat of battle. (Anderson)

After-action report from *Panzerjäger-Kompanie* 1253 equipped with *Sturmgeschütz* IV.

Owing to the situation, the company was almost exclusively be deployed in platoon strength. This will be necessary time and again for a PzJgKp (StuG) of an infantry division. Therefore, training must be focused on a smaller-scale deployment in platoon strength.

Due to its hasty commitment and the following retreat, the company lacked any time to practice cooperation with the infantry. The situation did not allow any contact with the lower commanders (non-commissioned officers).

Assaults by our troops were hindered by the low combat strength of the infantry and the lack of cooperation on the battlefield.





Barely recognizable in the field, this *Sturmgeschütz* III Ausf F/8 has been fitted with *Seitenschürzen* (side skirts) to improve protection (and losses) against Soviet light anti-tank guns and anti-tank rifles. (NARA)

Even the enemy's tanks and anti-tank guns avoided any contact during our counterattacks. He put up a stiff resistance only if our infantry was not involved. The company was issued with *Sturmgeschütz*, which were not fitted either with a machine-gun and shield, or the new *Rundumfeuer-Machinengewehr* [all-round fire machine gun]. In some situations the enemy can only be fought by machine-gun fire, and the lack of a machine gun cannot be substituted by firing more HE shells.

Supply:

The deplorable state of our motor vehicles has led to serious supply problems. The workshop unit was unable to operate, since it had only a few trucks to transport equipment.

In the bulletin, the department of the *Generalinspekteur* commented:

Statement by the *Generalinspekteur*

- 1) The deployment of a *Sturmgeschütz-Kompanie* in platoon strength can only be condoned by the situation, and must not become the rule... Only by utilizing the combined firepower and impact of the entire unit in close

cooperation with the infantry can the desired result be achieved without a significant loss of men and equipment. The results achieved by StuGKp 1045 provide positive proof.

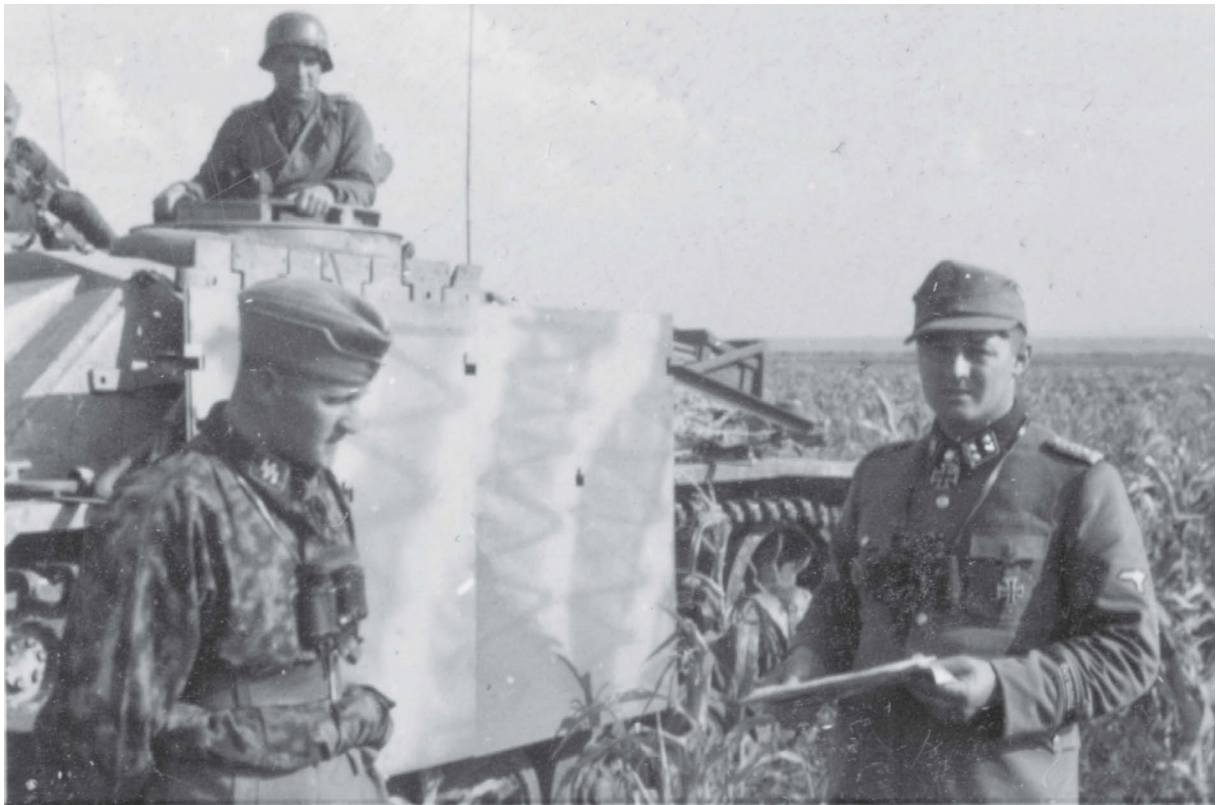
- 2) Camouflage consisting of flammable material must be attached in a way that it can be removed very quickly.
- 3) The rapid change of radio frequencies has to be practiced during training.
- 4) Sustaining the operational readiness of a StuGKp's, all the time necessary to prepare for a mission has to be allowed
- 5) The lack of the self-defence machine gun is a great disadvantage, and the *Generalinspekteur* underlines his urgent call for this weapon to be installed in the *Sturmgeschütz* and *Panzerjäger*. Great emphasis must be attached to the training with this device.

Combat in Normandy

The Allied landings in Normandy on 6 June 1944 brought the long-expected second front in Europe (Italy was an almost isolated theatre of war, since the French Alps formed a natural obstacle).

For German troops, the situation became challenging due to a lack of reinforcements and a shortage of heavy equipment. Any available forces

The *Seitenschürzen* (side skirts) on this *Sturmgeschütz* of 5.SS-PzDiv Wiking have been painted with an interesting camouflage scheme. Note T-34 track links were added at the superstructure sides. (NARA)





A *Sturmgeschütz* from SS-PzDiv Wiking ploughs through thick mud in a Russian village. The vehicle is fitted with *Winterketten* (winter tracks) which supplied much-needed improved traction. (Anderson)

had been sent to the *Ostfront* (Eastern Front) or Italy, but these were now under pressure from an advancing enemy. The units sent to halt the Allied landings soon reported very specific problems. A report by a staff officer dated 3 July 1944 reads:

Tank defence on the Normandy invasion front:

- 1) The available experiences regarding the tank defence refer to combat against the Allied invasion force in the period of 6 June to 24 June. The fighting took place in the hedgerows of Normandy. The experiences made here cannot be applied to other theatres of war.
- 20) The hedgerows of Normandy are not suited for the deployment of tank units. The terrain is also not favourable for the usage of a single tank. The numerous tall hedges impede vision and hinder the weapon's impact. Ridges and ravines make a speedy advance impossible.
- 19) Any major assault of enemy tanks took place, as anticipated, along paved roads or streets.

- 21) Combat operations: The character of this 'bush war' is neither the classic assault nor defence, but raiding operations.
- 25) Deployment: *Panzerjäger* and *Sturmgeschütz*: Both have tactically favourable characteristics, since they are trained for combat in small detachments or groups (half platoon). On the other hand, *Sturmgeschütz* are considerably at a disadvantage in combat in scrub-covered land due to their limited traverse and low-firing height. In ravines or gullies, they are defenceless against any attack on the flank.

Conclusion: Any advance by *Panzerjäger*, PaK (Sfl) and *Sturmgeschütz* in this area must be protected by a larger number of infantry than an advance by tanks.

This report is not surprising, as the basic problems for the deployment of tanks in 'Le Bocage' (hedgerow country) are obvious and *Sturmgeschütz* were certainly not suited for this area. The suggestion to provide StuGs with better flank protection by simply reinforcing the escort infantry did not always work; there were many instances where *Sturmgeschütz* became separated from the escorting infantry after being attacked by artillery barrage or ground-attack aircraft.

A *Sturmgeschütz* III Ausf G of 9.SS-PzDiv Hohenstaufen positioned at the edge of a forest on the Belgian border with Germany as part of the force assembled to halt the US Army. The 7.5cm StuK 40 L/48 would take its toll among the M4 Sherman tanks. (Anderson)





‘*neuses* *Sturmgeschütz*’ in 1945

7

During the final phase of World War II the number of important *Sturmgeschütz* in service with German armed forces increased dramatically.

The first *Sturmgeschütz* entered production in 1940 and was initially manufactured only by Altmärkische Kettenfabrik GmbH (Alkett) at Spandau (assembly) and Falkensee (chassis). As demand increased, Mühlenbau und Industrie AG (MIAG) at Amme Werk, Brunswick began production in 1943, and monthly output grew from 130 in January to 400 in October 1940.

An improved *Sturmgeschütz*

Due to several reasons, the tactical value of the *Sturmgeschütz* was seen as so important that a new weapon was developed – the *Jagdpanzer*. By 1942, both the military and political leadership had realized the seriousness of the supply situation. At the same time, a re-evaluation of German tank design began, which added to the already considerable amount of uncertainty. New types were conceived, developed and finally rushed into production without a preceding and extremely important trials phase. The main development was a massive increase in armour protection and sloped armour as used for the new PzKpfw V Panther medium tank.

The aim, at all levels, was to achieve an increase in combat power. In early 1943 work began on a new type of assault gun, for which the latest requirements were naturally adopted. The ‘*neues Sturmgeschütz*’ would have the following characteristics:

- A high level of armour protection: Sloping armour plates of 60mm (later increased to 80mm) at the front, and sloping 40mm armour for the sides.
- A more powerful main gun: 7.5cm KwK 40 L/48, later replaced by the 7.5cm KwK 42 L/70.

A Leit-Sturmgeschütz (control tank) of PzAbt 302 (FkI) in the ruins of Warsaw: The assault guns firing high-explosive (HE) ammunition proved effective against insurgents holding positions in buildings. However, there was the constant threat of enemy snipers firing down from the buildings. (Getty)



It appears that the crew of this *Sturmgeschütz* has applied Zimmerit to the *Seitenschürzen* (side skirts). Why would they do this? To author's knowledge no army used magnetic anti-tank hollow charges in the war. (Anderson)

- Improved self-defence: Front-firing port for a *Maschinengewehr* (MG) 34 and the installation of a short-lived *Rundumfeuer-Maschinengewehr* (all-round fire machine gun), and a *Nahverteidigungswaffe* (close-support weapon), which were never delivered in sufficient quantities.

Vogtländische Maschinenfabrik AG (VOMAG), which had been producing the PzKpfw IV tank since the end of 1941, was contracted to design, develop and produced this promising vehicle. In May 1944, all production was converted to the new *leichte Panzerjäger IV*, to be superseded a few months later by the Panzer IV/70 (V).

During development it was planned to eradicate the known shortcomings of the original *Sturmgeschütz*. However, this was only partially achieved. Whatever improvements were implemented, most were negated by the decision to fit the vehicle with unmodified PzKpfw IV suspension originally designed for a 17-ton tank. However, the Panzer IV/70 (V) weighed 26t due to it having 80mm frontal armour and mounting the powerful (and heavy) 7.5cm KwK 42 L/70 gun. The vehicle was dangerously overweight causing the chassis, suspension and the running gear to be over-stressed. The 'ultimate' new assault gun proved to be nose-heavy and almost impossible to steer over soft ground.

Yet another 'new' *Sturmgeschütz* arrived in April 1944 when BMM/Škoda delivered their PzJg 38 (*Hetzer* – Baiter) based on the chassis of the PzKpfw 38(t).

To make up for the loss of production caused by Allied bombing it was decided, in January 1944, to produce the StuG IV. This was technically

almost identical to the StuG III and was to be built by Krupp-Grusonwerk at Magdeburg, replacing PzKpfw IV production.

However, despite the fact that production of the type's successor had actually started, it was virtually impossible to terminate production of the old type of *Sturmgeschütz* in favour of the new type, as Adolf Hitler had demanded during a meeting on 20 April 1944. Both the StuG III (SdKfz 142) and StuG IV (SdKfz 167) would remain in production until end of the war.

The Nibelungenwerk in St Valentin, Austria now remained the only company manufacturing the PzKpfw IV, and production was increased temporarily to 300 units a month.

	StuG III Alkett, MIAG	StuG IV Krupp-Grusonwerk
1943	3,215	
1944	4,743	1,006
1945	1,055	105
Totals	9,013	1,111

The true importance of the 'old' *Sturmgeschütz* (and all the different *Jagdpanzers* based on this concept) for the German war machine becomes apparent by examining the production figures for the last months of the war. The total of Alkett and MIAG-produced 'old' *Sturmgeschütz* is approximately the same as that for all other tanks. Moreover, if the assault gun-armed *Panzerjäger* are added, the proportion grows to 2.6 to 1.

The conversion of the *Panzerwaffe* to modern equipment had finally failed.

December 1944:
US troops inspect
an immobilized
Sturmgeschütz of an
unidentified unit in the
town of Obergeich near
Koln (Cologne). (NARA)





1945	StuG III	StuG IV	PzJg 38	PzIV/70 (A) & (V)	Jagdpanther	PzKpfw IV	Panther	Tiger/B
January	391	46	434	235	72	170	211	40
February	189	18	398	155	42	160	126	42
March	235	38	301	51	52	55	102	30
April	48	3	113	—	21	50	—	—
Total	863	105	1,250	441	187	435	439	112

(Figures taken from: *Panzer Production* (Jentz) and the website Panther 1944.)

A *Sturmgeschütz* III Ausf. G mounting a 10.5cm *Sturmhaubitze* 42 (StuH – assault howitzer) on the firing range during trials. Note the non-standard search light mounted on the roof of the superstructure, which suggests that the vehicle is in 7.SS Freiw. GebDiv Prinz Eugen. (Anderson)

StuG in Non-Artillery Use

As noted earlier, the decision to deliver some of the *Sturmgeschütz* produced to services other than the *Heeres-Artillerie* was sensible, particularly after the latest disaster at Stalingrad. In conclusion:

- *Sturmgeschütz* were used to reinforce the tank destroyer elements of *Luftwaffe-Feldeinheiten* and later, infantry and mountain divisions.
- For the establishment of PzStuGAbt in PzGrenDiv.
- Finally to compensate for missing tanks in the Panzer divisions.

The reason for the slow conversion process dates back to the time when the Soviet T-34 and KV tanks were first encountered in 1941.

While the tank force quickly learned how to fight this threat, partly by tactical skills, and partly by much better leadership, all other units remained in desperate need of better weapons.

Widening the range of *Sturmgeschütz* duties was a logical step; in 1942 the type had proven its effectiveness and was highly appreciated by the fighting troops. However, the actual combat value of the *Sturmgeschütz* depended on how the type was deployed, the overall competence of commanders, the equipment situation at the mother unit and the efficiency of the supply chain.

Even in late 1944 on the *Ostfront* (Eastern Front), a certain level of tactical superiority was still being maintained. However, this superiority was limited to only small-scale deployments. Faced by the Soviet numerical superiority on the ground, the massive artillery bombardment before any large (or even small) attack, followed by ground-attack aircraft, German commanders realized that defeat could only be delayed. Taking a broader view, German forces had made rapid advances on many battlefronts and achieved most of their objectives, but had become dangerously overstretched. As a consequence of the above, the *Ostheer* (Army East) had been forced to begin a slow withdrawal in 1944.

A rare example of an after-action report from *Sturmgeschütz* issued to a PzJgKp of an unknown infantry division in the east was published in the January 1945 issue of *Nachrichtenblatt der Panzertruppe*:

A MIAG-built *Sturmgeschütz* is a transported over a river on a ferry assembled from pontoons by field engineers. Note spare track pins have been placed into the spare road wheel mounted on the rear. (Anderson)



Sturmgeschütz in the last winter of the war: All three are packed with 'riding' infantry; the first appears to be towing the following vehicle, although this was officially forbidden. However, units regularly ignored the order, as every *Sturmgeschütz* was regarded as precious and recovery was (when possible) essential. (Getty)







Experiences of a StuGKp with fighting the Josef Stalin tank:

The company had the mission of holding an important village in cooperation with the divisional reconnaissance battalion. After the Bolsheviks failed three times to take the place, they decided to set up an attack after very heavy preparatory bombardment. The fourth attack was launched, supported by two Josef Stalin [JS] and their four remaining T-34s. The enemy tanks made best use of heavy smoke from the burning village blowing over our front line. When the smoke cleared, the tanks (the JS in the lead) were at in 300m to 400m distance among some destroyed tanks, opposite our *Sturmgeschütz*. When they lost the cover of smoke, they turned and retreated. During this manoeuvre, all were knocked-out within 20 minutes, one JS by a clear penetration on the left-hand side of the turret, the other by a hit on the rear armour of the turret below the machine gun port.

The next day the Russians attacked only with infantry, but positioned two JS at 2,000m distance, providing fire support for the infantry. The attack was repulsed; our *Sturmgeschütz* had no losses since they constantly changed position.



Two *Sturmgeschütz* move up through a village at the *Ostfront* (Eastern Front) in 1943: Only the first one is fitted with side skirts; the German military attempted to deliver these items to all front-line *Sturmgeschütz* and Panzer units before *Unternehmen Zitadelle* (Operation Citadel), but failed. (Getty)

At dawn the next day, the Russians attacked with three JS, carrying infantry, from the northern flank without any artillery support.

Since the JS had been spotted early enough, the company was regrouped in a way that the tanks would inevitably run in a *Feuersack* (fire sack [trap]). The company had at this time six *Sturmgeschütz*: Two were used to lure the JS into the trap and four were positioned in the flanks to open fire at the ideal range. The attack of the three JS was aimed at the centre of the village, where the two centrally positioned *Sturmgeschütz* waited in their positions. At a range of 300m an anti-tank gun of the reconnaissance battalion opened fire. A direct hit on the front of the JS was achieved, but did not penetrate. However, the crew, abandoned their tank immediately. One *Sturmgeschütz* moved into a better position to get clear field of fire. Its first round hit the tank, blasting off the commander's cupola of the abandoned tank, which then burst into flames. The remaining JS turned without opening fire. After nightfall they moved again into position some 700m away from the northern of the village and opened fire on our anti-tank gun positions. In this situation they were attacked from the left flank by two *Sturmgeschütz* from a favourable range (600m). After being hit by four shells, one penetrated the side of the turret



A *Sturmgeschütz* Ausf G being disembarked from a *Marinefahrprähm* sea-going lighter. Images of other units using ferry transport show that the *Seitenschürzen* (side skirts) were removed before loading. (Hoppe)

and the JS caught fire. The tank burnt out completely; the crew did not escape. The crew of the second JS abandoned their tank after the first hit, which did not penetrate. With three further rounds, of which one penetrated the side of the turret, the abandoned tank caught fire and finally exploded.

In these few days the company, which held the village with six *Sturmgeschütz*, destroyed nine T-34 and five JS without loss. Proof of that it is possible to destroy the JS by fire from the 7.5cm StuK 40 with PzGr 39 at ranges of up to 700m. That will need only good nerves, a cool head and a correct tactical deployment.

During the combat it became obvious that the JS catches fire as easily as the T-34. In rough terrain, the JS lacks the mobility and agility of a T-34, so that it can be attacked and destroyed by two *Sturmgeschütz* with well-trained and aware crews. It is important to change position after two or three rounds are fired. The JS has a low rate of fire that should be always exploited.

The bureau of the *Generalinspekteur of the Panzertruppe* gave a telling comment:

The success of this StuGKp again shows that the Josef Stalin, the heaviest Russian tank, can be defeated by the 7.5cm L/48 gun. The prerequisites for a successful attack are thorough camouflage, best possible usage of the terrain, and hit-and-run style deployment at favourable combat range.

These remarks show how far some officials were from reality in 1945, although the successful combat by this un-named infantry division shows that it was possible to defeat even the mighty JS-2 heavy tank by tactical planning and careful deployment. In France after the invasion, German forces had to face a different opponent whose massive army was well equipped with modern armour, anti-tank weapons and which was tactically well organized. Air superiority, which halted any movement by German forces, which was also used to attack road convoys and railway trains carrying supplies to the front.

The few *Sturmgeschütz* attached to the infantry divisions were not able to withstand the power of the Allied advance.

When attached to a tank division, the basic design of the StuG made any effective combat against a well-trained enemy force a difficult task.

The table '*StuG lage 2 February 1945*' was published by the Quartermaster General to show the number of *Sturmgeschütz* operational within all (except *Sturmartillerie*) German units. The list also contains some interesting detail:

- Even in 1945, not all infantry divisions had been reformed with a 'new style' PzJgAbt.
- Some units were equipped with *Sturmhaubitze*.
- A small number of 7.5cm KwK L/24 and L/43-armed StuG remained in service.

These German soldiers give scale to the low height of the *Sturmgeschütz*. Although normally deployed in the offensive role, if it was carefully dug in hull-down it would be virtually invisible and ready for a deadly ambush. This StuG Ausf G was produced after August 1944 is fitted with the *Saukopf* (pig's head) mantlet and no factory-applied Zimmerit. (Anderson)







A *Sturmgeschütz* and a column of Borgward B IV Ausf B *Ladungsträger* (demolition charge carriers) from Panzer *Versuchs-und Ersatzabteilung* (PzVersAbt – experimental and replacement battalion) 300(Fkl): The StuG is possibly an experimental *Leitpanzer* (control tank), but the additional aerial for the radio-control equipment is not fitted. (Anderson)



It was essential to remove all the mud and other debris from the running gear on a *Sturmgeschütz*. All moving parts required periodic lubrication, but the oil in the transmission and engine had to be changed regularly. Note that the crew had improved the mounting brackets for the side skirts by welding on a section of angle steel. (Anderson)

- Units deployed in Italy and the Balkans had to use Italian-built *Semovente* (self-propelled guns).
- Some battle-worn units only had the status of a *Kampfgruppe* (KpfGr – battle group).
- Even a small number of PzKpfw II light tanks had been issued to a few units.

In August 1944, 14.PzDiv with PzRgt 36 was re-equipped after its deployment to Bessarabia (Moldova and Ukraine). According to an August 1944 strength report, the unit was authorized to have a PzStuGAbt (III.Abt/PzRgt 36) with 44 *Sturmgeschütz*, and also 21 PzKpfw IIIs and 54 PzKpfw IVs forming a II.Abt. After being issued with PzKpfw V Panther medium tanks in France, I.Abt/PzRgt 36 was immediately transferred to the Kurland (Courland) peninsula in Latvia to support German forces involved in heavy fighting against the Red Army which was determined to overrun the area.

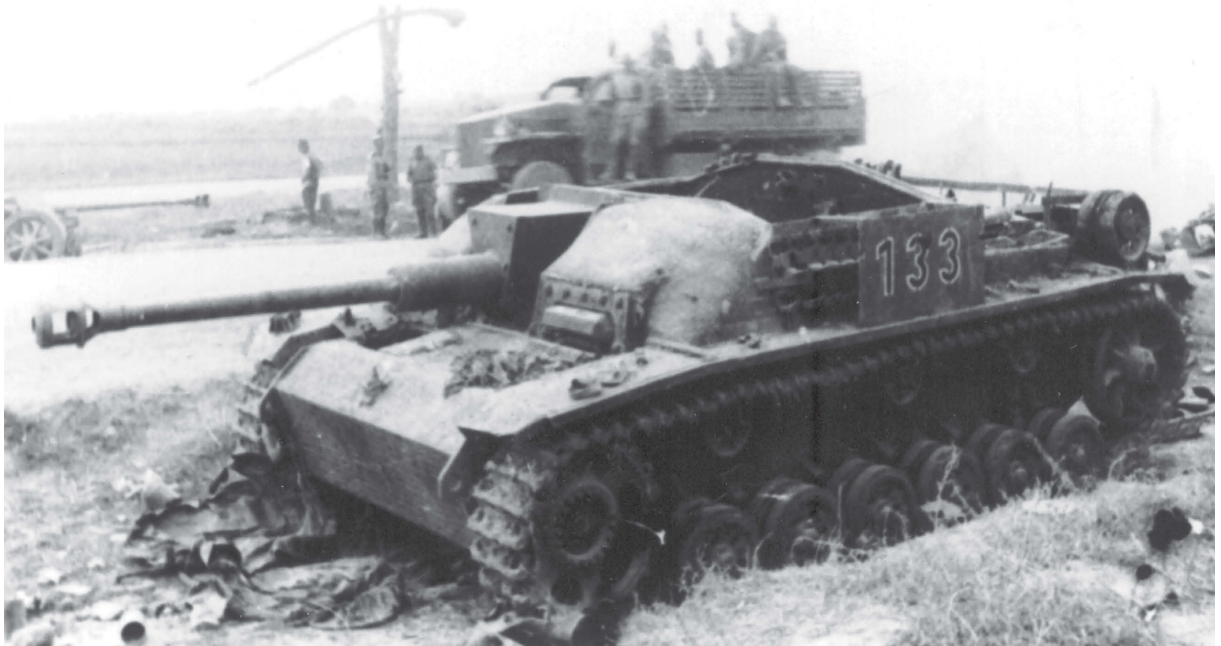
6.Abt/PzRgt 36

Combat report dated 12 October 1944

Attached to I.Abt/GrRgt 23

Course of the fighting:

Shortly after 06:00hrs the enemy attacked on both tracks from the south towards Skuodas [Lithuania]. The company moved into position in the western



part of Skuodas with two *Sturmgeschütz*. After a Russian infantry attack was repelled, at 08:30hrs three JS and five assault guns advanced to support the infantry in the southern part of Skuodas. Three JS and four assault guns were destroyed; the remaining assault guns turned and retreated. The company remained to safeguard the positions. While moving into new positions we destroyed an anti-tank gun. At 16.30hrs two further assault guns were reported to be advancing on Skuodas. When the company arrived, one had already been destroyed by our anti-tank guns; the other was then destroyed by a *Sturmgeschütz* of the company. In the following hours, our positions were hit by heavy fire from artillery, anti-tank guns, tanks and mortars.

Soviet soldiers leave their US-built GMC truck to inspect a knocked-out *Sturmgeschütz*. The crew had applied concrete to the front of the superstructure, but it appears that this StuG has received a direct hit which has blown the roof off of the fighting compartment. (Anderson)

Daily report:	combat ready:	Two StuG
	under repair within 14 days:	Five StuG
	under repair over 14 days:	One StuG
	Losses:	None
	Enemy losses:	Three JS
		Five Assault guns
		One Anti-tank gun

This stunning combat success was achieved with only two operational *Sturmgeschütz*. Other documents show that commitments such as this were not the exception; German losses were always disproportionately lower than those of the Soviets. However, the equipment situation in PzRgt 36



Effectively camouflaged with whitewash, a *Sturmgeschütz* Ausf G travels along a narrow track in a snow-covered forest. The vehicle has *Seitenschürzen* (side skirts) and two spare road wheels are carried on the track guard. Note that the vehicle is fitted with smoke candle dischargers. (Anderson)

was critical, and by November 1944, II.Abt/PzRgt 36 reported that it had a mixed establishment of only a few tanks. This was quite usual for Panzer divisions in the east; many infantry and *Volksgrenadier* units involved in the fighting had an even worse establishment of armoured vehicles and heavy anti-tank weapons. The war reached its bitter end.

II./PzRgt 36 13 October 1944	PzKpfw IV (lang)	StuG	PzKpfw III	<i>Flakvierling</i>
Combat ready	5	3	1	3
Short-term repair	12	2	1	—
Long-term repair	4	1	—	—
Total losses	15	5	1	—

PzJgAbt 4 of 32.InfDiv

For infantry forces without integrated mobile armour such as tanks, the requirement for an effective mobile anti-tank defence was essential. Although this was recognized early it became crucial during the fighting in the east between 1943 and 1944.

When winter arrived in 1944, 32.InfDiv had an integrated StuGKp with ten *Sturmgeschütz* and was part of the German force defending East Prussia. On 2 December 1944, 32.InfDiv submitted an after-action report detailing their experiences of the second Battle of Kurland:

Experiences:

Enemy

1.) Before the assault

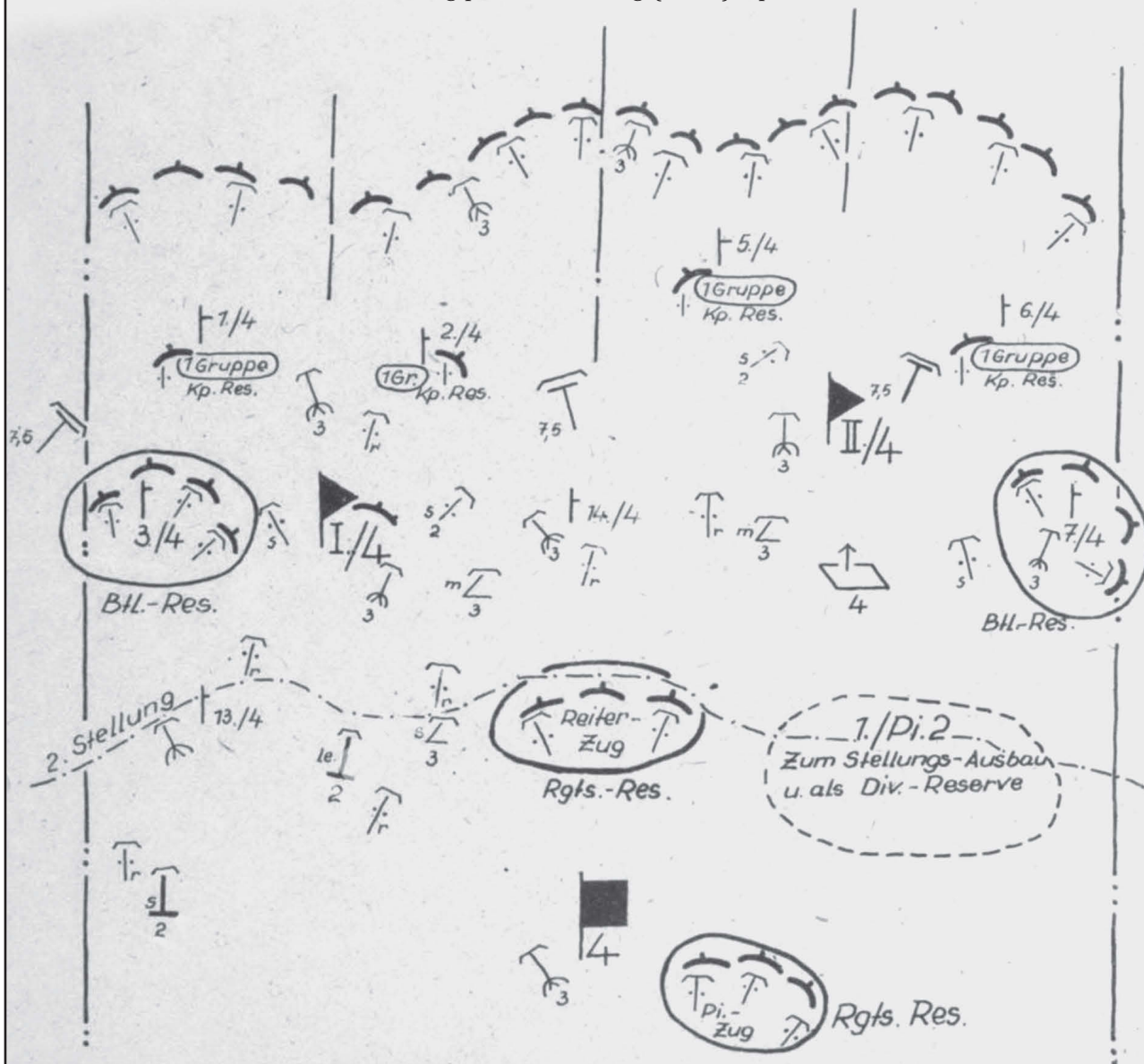
We noticed that the enemy launched very strong reconnaissance missions before his main attack. From 19 to 21 November he launched heavy assaults with limited objectives, supported by combined preparatory artillery bombardment and tank charges, in order to gain favourable starting points for the commitment of his main tank force. For us, these preparatory assaults had an advantage – the enemy could not disguise of his intentions. Subsequently the enemy suffered heavy losses. Furthermore we were able to take prisoners.

Enemy propaganda units started to free German POWs after showing them his large arsenal of heavy weapons and tanks, in order to demoralize our troops. This attempt failed.

The crews knew about the problems with the side skirt mountings, so many units tried to convert and improve them using their own means. This particular vehicle received a small deflector in front of the first plate. (Anderson)



Theoretical structure of Grenadierregiment 4 in the depth of the battlefield,
showing position of PzJg (StuG) Kp 4



Key:


 Stug-Zug
 4 Stug

 Infantry in trenches

Machine gun
(MG)

 7.5 PaK 40
anti-tank gun

le.  7.5cm sIG 18
2 Light infantry gun

† Company
Commander

Gun
positions

 Panzerschrek

$\frac{s}{2}$ 15cm sIG 33
Heavy infantry gun

m $\angle$ Mortar

2.) During the major offensive

Because of the unfavourable terrain and weather conditions, the enemy could neither commit his superior air force nor deploy his tank units to full extent. The enemy tried to compensate for the lack of these forces by keeping up an intense bombardment from artillery of all calibres.

Despite this heavy barrage, enemy infantry could only gain success at places where our infantry had been virtually wiped out. Even surviving machine-gun crew was able to deter a number of massive infantry assaults. A number of counterattacks led by an energetic officer with a few brave men and *Sturmgeschütz* have repeatedly repelled away strong enemy battalions. Our night attacks, even in moonless conditions, proved to be most effective. The Russians ran in fear from our advancing men, who were shouting "Huzzah", and firing their *Sturmgewehr* [MP44] from the hip.

3.) The enemy's peculiarities

a) Infantry

Enemy infantry was, despite constant replenishment, poorly trained. They were never encouraged forward during an assault, and as soon as they met stiff resistance they always retreated.

Exception: The Russian punishment battalions: The troops of these units see their only chance for parole to take part in valiant combat. Any appearance by our *Sturmgeschütz* or tanks impressed the enemy in such a way that every attack collapsed; whereas our counterattacks supported by armour usually succeeded.

c) Tanks

Even if the operational deployment of the enemy's tank forces was impeded by the terrain, smaller *Panzerrudel* (pack of tanks) were used at points of main effort to support an infantry attack. It was noticeable that the Russian tanks still have better mobility than ours. The impact of their tank guns was powerful enough to destroy our heavy tanks (Tiger). However, when they suffered their first losses to our anti-tank defences, they quickly became discouraged and retreated to fire their weapons from longer range.

d) The Russian commanders proved to be unable to exploit any initial success.

Own forces:

1.) Infantry

The performance of our infantry was exemplary despite being under constant attack and suffering almost total exhaustion. Officers and the few remaining proven senior NCOs were at the heart of our resistance.

3.) Anti-tank defence

The backbone of our anti-tank defence were the mobile tank destroyers (*Sturmgeschütz* and Panzer), and close-combat anti-tank weapons. The PaK mot Z

The rubber tires, especially those of the inner road wheels, wear out often. In most cases loosening of the bonding.

(towed anti-tank guns) of the PzJgAbt could be only used as infantry strongpoints. Organization of the anti-tank defence by the divisional *Stabsoffizier für die Panzerbekämpfung* (Stopak – staff officer anti-tank defence) proved effective. Defensively the *Sturmgeschütz* and Tiger tanks proved to be a success, but their mechanical vulnerability remained a constant problem. The commander could only rely on a third of these vehicles being operational.

It is interesting to note that the *Sturmgeschütz*, despite their many shortcomings, were still being rated as successful even in late 1944. The reduction of the well-armed PzKpfw VI Tiger heavy tank to a 'mobile anti-tank weapon' is telling, but understandable due to the special circumstances of the Kurland battlefront.



The outcome of the second battle for Kurland was decisively influenced by the terrain and the weather. Despite having a great numerical superiority, and unlimited supplies the Soviets proved to be unable to decisively defeat the German forces after fighting six battles.

It is true that in late 1944 the Red Army had concentrated its forces in the central and southern sector of the battlefront and was steadily advancing on Berlin and other centres of power. To a certain degree, Kurland was regarded as being a secondary battlefront. However, the number of Soviet forces being concentrated on the Baltic front was far superior to the fragmented units which made up the trapped Heeresgruppe Kurland. German forces held their positions on the peninsula until the Third Reich surrendered on 8 May 1945.



Königsberg in 1945:
A Russian soldier walks
down a path cleared
through equipment
abandoned by a German
armoured anti-tank
battalion. To the right are
the wrecks of two
StuG IVs; the StuG III
Ausf G (left) has been
fitted with improvised side
skirts. The *Bergepanzer*
III in the background has
been fitted with an armour
plate with a slot for a light
weapon, possibly an anti-
tank rifle. (Anderson)

Sturmgeschützlage by 2 February 1945

All army groups, no *Sturmartillerie* units, operational vehicles only

Unit/ordnance	PzKpfw II	StuG L/24	StuG L/43	StuG L/48	StuH 42	StuG IV	L40 47/32 (i)	M42 75/34 (i)	M43 105/25 (i)
Heeresgruppe Süd									
357. InfDiv				4					
PzJgKp LXVIII. AK							3		
71. InfDiv								3	
2. SS StuG Kp 105			6						
118. JgDiv							6		
Armeegruppe 'Balck'									
1. PzDiv				1					
3. PzDiv				9	1				
23. PzDiv				4					
PzDiv FHH, no report									
3. KavBrig				7	4	1			
4. KavBrig				7					
3. SS PzDiv Totenkopf				15					
5. SS PzDiv Wiking						2			
96. InfDiv	1					3			
22. SS KavDiv			4						
46. InfDiv (1052) (KpfGr)				4					
8. JgDiv (1008)				5					
101. JgDiv				5		4			
Heeresgruppe Mitte									
10. PzGrenDiv (KpfGr)				26					
291. InfDiv (1291)						10			
88. InfDiv (1188)						10			
72. InfDiv (1072)				9					
342. InfDiv				9					
17. InfDiv (1017)				10					
45. VGrenDiv (1045)				9					
6. VGrenDiv				9					
Armeegruppe Heinrici									
254. InfDiv				8					
1. SkiJgDiv				8	1				
253. InfDiv 1 10									
StuGZug PzAOK 1	3				3				
208. InfDiv (1208)				6					
3. GebDiv (KpfGr)				4					
545 VGrenDiv (1545)				9					
344. InfDiv no report									
544. VGrenDiv (1544), no report									
371. InfDiv (1371)				8					
20. PzDiv						10			
712. InfDiv				10					
100. JgDiv				8					
168. InfDiv (1248) (KpfGr)				12					
StuRgt PzAOK	4						12		
ArtBrig Grossdeutschland, tbd		32	8						
PzGrenDiv Brandenburg, tbd				21					
16. PzDiv				24					

tbd: to be delivered.

Unit/ordnance	PzKpfw II	StuG L/24	StuG L/43	StuG L/48	StuH 42	StuG IV	L40 47/32 (i)	M42 75/34 (i)	M43 105/25 (i)
20.PzGrenDiv (KpfGr Jauer)			46						
Fallsch PzDiv 1 Hermann Göring, tbd			17						
Heeresgruppe 'Weichsel'									
4.SS Polizei PzGrenbDiv					10	8			
PzJgKp 1021 (L), tbd			10						
PzJgKp 1269, tbd			10						
251.InfDiv						7			
542.VGrenDiv (1542)						14			
252.InfDiv (1205)						1			
35.InfDiv (1035)				13					
5.JgDiv				13					
7.InfDiv (KpfGr)						13			
PzAbt 302 (Fkl)				26					
Heeresgruppe Nord									
32.InfDiv (1032), tbd					10				
227.InfDiv (1227), tbd			10						
24.PzDiv				1	1				
PzJgKp 1233				9					
StuGAbt 1006 (L)				11					
4.PzDiv, advancing						14			
18.PzGrenDiv				31	2				
28.JgDiv (1028)			10						
541.VGrenDiv (1541)						14			
102.InfDiv (1102)						10			
14.InfDiv				11					
292.InfDiv (1292)						8			
PzGrenDiv Grossdeutschland				2	1				
299.InfDiv				9					
562.VGrenDiv (1562)				9					
131.InfDiv						9			
558.VGrenDiv (1558)				9					
170.InfDiv (1240)				3					
367.InfDiv (1367)				8					
50.InfDiv (1150)				10					
21.InfDiv (1021)				2					
Fallsch PzGrenDiv 2 Hermann Göring			29						
61.InfDiv						5			
5.PzDiv				1					
549.VGrenDiv (1549)				4					
1.InfDiv (1001)				9					
69.InfDiv (1169)				10					
56.InfDiv (1156)				10					
561.VGrenDiv				10					
95.InfDiv (1195)				8		8			
548.VGrenDiv						6			
58.InfDiv (1158)				7	1	7			
Heeresgruppe 'Kurland'									
190.InfDiv				6					
30.InfDiv				9					

tbd: to be delivered.

Unit/ordnance	PzKpfw II	StuG L/24	StuG L/43	StuG L/48	StuH 42	StuG IV	L40 47/32 (i)	M42 75/34 (i)	M43 105/25 (i)
14.PzDiv				14					
87.InfDiv (1187)						4			
11.SS Freiw. PzGrenDiv Nordland					7				
126.InfDiv (1126)						10			
11.InfDiv (1011)								10	
218.InfDiv (1218)						7			
263.InfDiv (1263)								8	
563.VGrenDiv (1563)				2		9			
121.InfDiv (1121)								8	
132.InfDiv								7	
225.InfDiv (1225)						2		5	
12.PzDiv						22			
329.InfDiv (1329)						4		5	
389.InfDiv (1389)								9	
215.InfDiv								10	
24.InfDiv (1024)						3		8	
122.InfDiv (1022)								10	
93.InfDiv (1193)								8	
81.InfDiv (1181)						6			
205.InfDiv (1205)						7			
AOK 20 (Norwegen)									
PzBrig Norwegen					10				
14. Lw Fdiv						4			
Dänemark									
233. Res PzDiv						4			
West									
1.SS PzDiv Adolf Hitler						2			
2.SS PzDiv Reich						7			
9.SS PzDiv Hohenstaufen					13				
25.PzGrenDiv						2			
Führer-BeglDiv						10	7		
Führer-GrenDiv						1			
361.VGrenDiv						8			
Heeresgruppe 'H'									
Fallsch ErsuAusbRgt Hermann Göring			1						
346.InfDiv (1346) (KpfGr)						10			
84.InfDiv (KpfGr)						2			
190.InfDiv, no report									
Fallsch StuGBrig 12 (mot)						17	2		
Heeresgruppe 'B'									
116.PzDiv						2			
PzJgAbt 559						7			
85.InfDiv						2			
353.VGrenDiv								7	
12.VGrenDiv						1			
3.FallschJgDiv (1348)								8	
15.PzGrenDiv						16			

Warsaw in the summer of 1944: A *Sturmgeschütz* of PzAbt 302 (Fkl) fires on a building occupied by partisans. The pile of empty shell cases lays testimony to the fierce battles fought during the uprising. (Getty)







Conclusion 8

Even in the modern era, the *Sturmgeschütz* assault gun; its subsequent technical development and tactical deployment (from 1940 onwards) continues to hold a certain fascination for military enthusiasts and historians.

The soldiers of the new *Sturmartillerie* considered themselves as members of an elite force, possibly comparable the British SAS or to the infamous Waffen-SS. This feeling of superiority led to a formidable esprit de corps which the German propaganda machine exploited in a vast number of newspaper and film reports.

After the end of World War II, this spirit continued as veterans of the *Sturmartillerie* kept in contact by forming *Alte Kameraden* (old comrades) associations which met on a regular basis. Over the years, the author has been able to speak to many of these veterans and heard their tales, many interesting and some moving experiences. However, he did have to learn that as more years passed, the veterans began to spend more time glorifying their role in the war and extolling the power of their assault gun.

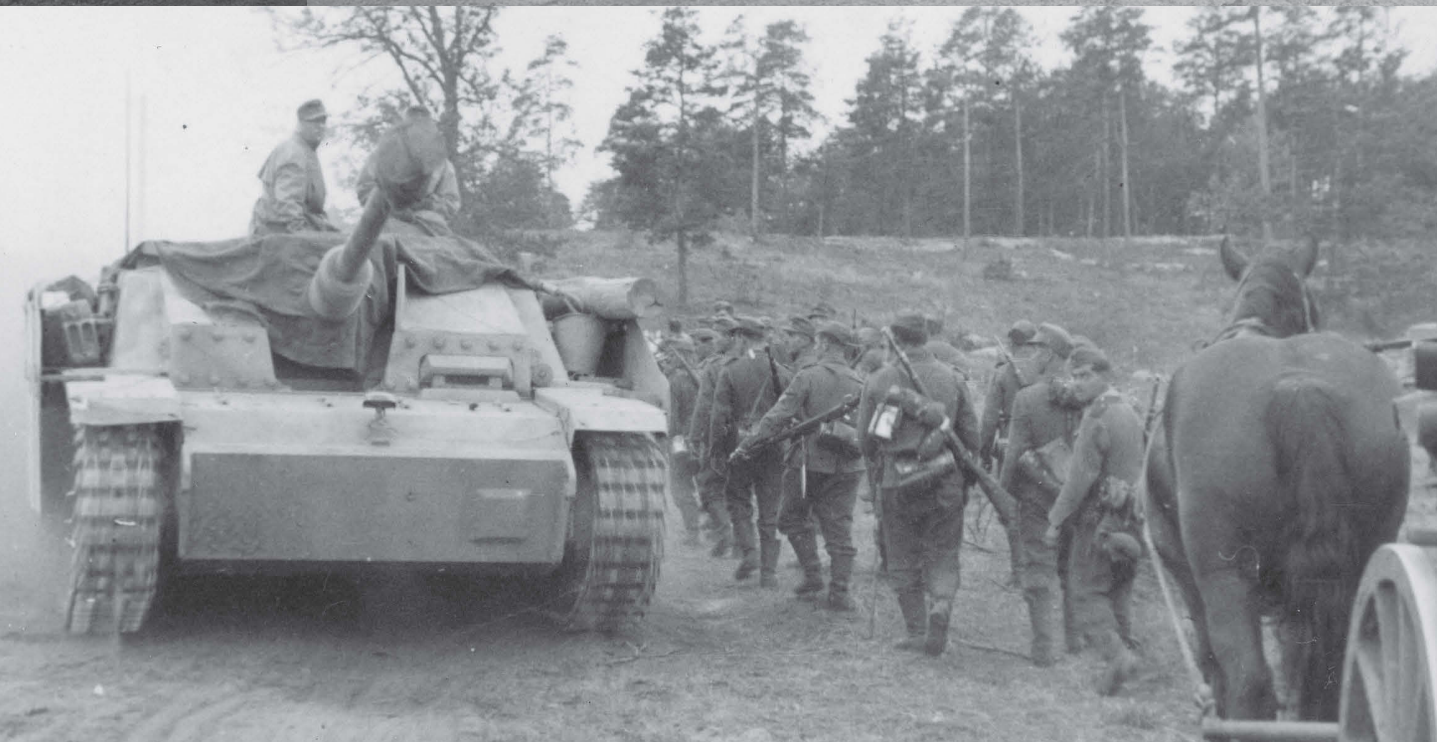
The author has made an effort not to be over-awed by this and concentrate on assimilating the facts. This was not always easy as even an inquisitive author can be affected by emotions. However, every single piece of information gathered had, whenever possible, to be cross-checked against information found in archives. In some cases documentation just did not exist.

Nevertheless, the achievements of the *Sturmartillerie* equipped with *Sturmgeschütz*, especially on the *Ostfront* (Eastern Front), were numerous and formidable. (See *Sturmartillerie: Spearhead of the Infantry*. Osprey: 2016.)

***Sturmgeschütz* vs Panzer**

Perhaps Guderian's concept of armoured warfare and the type of tank required to break through enemy lines was forward-looking, but it was not revolutionary.

Developed as an answer to the Soviet T-34 and KV-1 tanks encountered in 1941, the 7.5cm Stuk 40 L/48 became the standard ordnance for the *Sturmgeschütz*. This powerful weapon proved to be effective against all enemy tanks up until the war ended. (Anderson)

**Above:**

A *Sturmgeschütz* Ausf G passing a column of infantry supported by horse-drawn transport. Note the square plate which has been welded on the front plate to cover a hole left by a shell. (Anderson)

Right:

The commander of a *Sturmgeschütz* in the cupola: First introduced on the Ausf G, this item fitted with seven vision blocks was a great improvement and allowed all-round vision of the battlefield. (NARA)



However, in 1940 when German forces launched their *Blitzkrieg* (lightning war) attack through northern Europe, French and British forces collapsed in the face of concentrated tank assaults.

The *Sturmartillerie* units attached to infantry divisions to provide fire support were of equal importance during the invasion. Whenever and wherever *Sturmgeschütz* were available, they would play a vital part in every German advance, in company with tanks of the *Panzerwaffe*, from 1940 to 1942.

After German forces were routed from Moscow in December 1941, the strategic situation began a slow change. From 1942, there was a urgent requirement to develop weapons powerful enough to defeat the ever-increasing numbers of Soviet tanks. A simple solution was to deploy the *Sturmgeschütz* in the anti-tank role. In the coming years, the type was improved and when up-gunned with the 7.5cm StuK 40 L/43 it became an effective tank destroyer and much feared by attacking tank forces.

The parlous economic situation in the Third Reich seriously delayed the building of new production facilities to meet the requirements of the *Panzerwaffe*. The subsequent shortfall in tank numbers forced military planners to increase *Sturmgeschütz* production.

A *Sturmgeschütz* concealed behind a heap of straw in the yard of a farm in Russia. The vehicle is fitted with late-type *Ostketten* (east tracks) and a Bosch headlamp, an item usually fitted on German tanks, mounted on the left track guard. (Anderson)



The *Sturmgeschütz* was conceived to support the infantry by directly attacking the enemy in their positions. Combat against an enemy tank was to be avoided, but if it did occur (at close range) the *Sturmgeschütz* was often the victor.

However, in a counterattack against enemy tanks, the StuG was very vulnerable to any attack on the flanks. Also being turretless the vehicle could not be quickly manoeuvred to gain line-of-sight on enemy armour, advancing from the side, or a well-hidden anti-tank gun. The lack of a close-defence weapon (machine gun) was a grave error.

This tactical disadvantage called for certain measures to be taken. Soon specialist infantry support platoons were provided to guard the *Sturmgeschütz* serving with other forces – *Sturmartillerie*, *Panzertruppe* and Infantry.

However, deployment of the *Sturmgeschütz* remained difficult. It was important for the commander of the unit to be as tactically aware as his



StuG commanders, and be aware of the type's limitations under certain battlefield conditions. A number of after action reports in this book will have enlightened the reader.

Development of the *Sturmgeschütz* (in the context of this book the StuG III, and later the StuG IV), and with it the Panzer IV began in the mid-1930s, but by 1941/42 both were outdated by the modern T-34 and KV tanks; also to a certain degree by the US-built M4 Sherman. In this critical situation, both the Panzer IV and the *Sturmgeschütz* proved to be in need of updating. The short-barrelled 7.5cm KwK L/24 gun mounted in the StuG was replaced by the more powerful 7.5cm StuK 40 L/48, and frontal armour was increased to 80mm.

Now the problems with the structure of the German armaments industry became apparent. It proved to be impossible to produce sufficient numbers of the planned successor to the Panzer IV; the PzKpfw V Panther medium



In early 1944, 11.PzDiv was positioned in France to be re-equipped and undertake training exercises. While there it received a *Sturmgeschütz* company to strengthen PzJgAbt 61, its tank destroyer battalion. (Anderson)



Hungary 1945: Men of PzJgAbt 1052 in front of a late production *Sturmgeschütz III* mounting *Rundumfeuer-Machinengewehr* (all-round fire machine gun). The tactical number 124 has been stencilled in black on the *Seitenschürzen* (side skirts). (von Aufsess)

tank. And while the development of a '*neues Sturmgeschütz*' (new assault gun) would eventually lead to the *leichte Panzerjäger* (Ie PzJg) IV and the Panzer IV/70 armed with the 7.5cm KwK 42 L/70, they would also, due to many diverse reasons, never be produced in sufficient numbers.

Subsequently it proved to be indispensable to keep both the *Sturmgeschütz III* and the PzKpfw IV in production until end of the war.

It is important to remember that towards the end of the war *Sturmgeschütz* units in the east, whether under the command of the *Sturmartillerie* or attached to subunits in the infantry divisions, were still achieving a great number of victories over Soviet forces: The number of enemy tanks they destroyed is astonishing.

Although there is the danger of careless simplification, it seems that the German units were able to overcome their numerical inferiority on the Eastern Front by utilizing much better tactical skills.

Fighting against Allied troops, this advantage was nullified. After-action reports made in Normandy and in Italy show that the lack of a turret was a major problem. In the narrow tracks through the Italian mountains and the hedgerows of Normandy, it would be almost impossible for the gunner in a *Sturmgeschütz* to align his gunsight on a target.

The *Sturmgeschütz*, a low-profile, turretless assault gun was a true German invention and was possibly the most significant armoured fighting vehicle of World War II; particularly in the vastness of Russia. The *Sturmgeschütz* will remain an iconic weapon, thanks to the incredible number of tank kills, and the combat history of StuG units contains incredible stories of success and many defeats.

The Soviets were impressed by the *Sturmgeschütz*, and used the concept to design their own assault guns (SU-122, SU-85, SU-100 and ISU 122 and ISU 152). The concept continued after the war, as the Soviets developed the heavily-armed mobile weapons such as the SU-122/54.

In the 1960s two turretless types entered service; the Swedish Army, developed the Stridsvagn 103 (S-Tank) and the 90mm *Kanonenjagdpanzer* (tank destroyer gun) for the *Bundeswehr* of West Germany. Possibly the last 'ancestors' of the *Sturmgeschütz*.

The main battle tank in the armies of today is a multi-functional and more versatile weapon.

It was common practice for the crew of a StuG to burrow-out a hole under their vehicle as a shelter from enemy artillery fire. On the rear of the vehicle the tactical marking 'G' is just visible; the Balkenkreuz has a non-standard black outline. (Anderson)







The *Seitenschürzen* (side skirts) were never intended to give protection against fire from a heavy weapon. This late production *Sturmgeschütz* has received a direct hit which has penetrated the skirts before punching a hole in the side armour of the hull. (Getty)

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April 1944: A *Sturmgeschütz* Ausf G of PzDiv Hermann Göring has been positioned on a bridge near Monte Cassino in preparation for an attack by advancing Allied forces. The unit deployed its Stug, with much success, against enemy troops attacking the Benedictine monastery and the surrounding area. (Getty)



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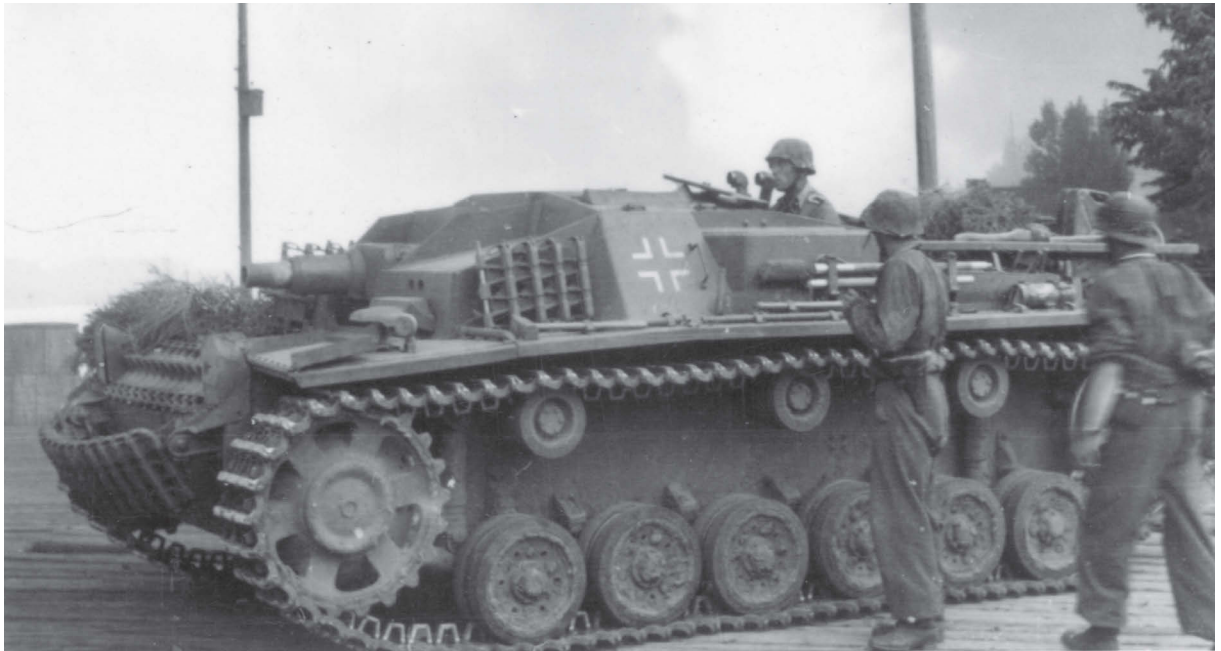
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The commander of a *Sturmgeschütz* Ausf C or D from Liebstandarte-SS Adolf Hitler (LSSAH) observes a target in preparation for providing support fire. Note the *Scherenferrohr* (scissor telescope) fitted in his position. (NARA)

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Two *Sturmgeschütz*
Ausf F/8 of PzDiv
Hermann Göring pass
along a street in an
unknown Italian city
during the retreat to the
north after Allied forces
were victorious at Monte
Cassino on 25 May 1944.
(Anderson)



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